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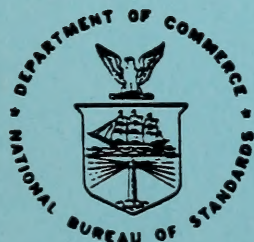
# Hazard I. Volume 2: Representative Example Case Documentation

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R. W. Bukowski and A. J. Shibe

U.S. DEPARTMENT OF COMMERCE  
National Bureau of Standards  
National Engineering Laboratory  
Center for Fire Research  
Gaithersburg, MD 20899

July 1987



U.S. DEPARTMENT OF COMMERCE  
NATIONAL BUREAU OF STANDARDS

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NBSIR 87-3603

**HAZARD I.**  
**VOLUME 2: REPRESENTATIVE EXAMPLE**  
**CASE DOCUMENTATION**

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**U.S. DEPARTMENT OF COMMERCE, Malcolm Baldrige, Secretary**  
**NATIONAL BUREAU OF STANDARDS, Ernest Ambler, Director**







## REPRESENTATIVE EXAMPLE CASE DOCUMENTATION

This volume of the HAZARD I report contains the detailed documentation of the eight example case scenarios discussed in Chapter 5 of Volume I. Each of the cases were analyzed twice on the CFR minicomputer (to take advantage of the increased processing speed), using the HAZARD I software. First, the cases were processed with the full number of rooms (seven in the ranch, eight in the townhouse, or nine in the two-story) as specified by the panels. Next, the examples were re-run as five room cases so that comparisons could be made to the results obtained under the five room limit associated with the PC version of the software. Both sets of results are presented here for each example case. Several of the cases were also run on a PC to compare against the five room results obtained on the minicomputer. The data showed only minor variations (less than 1%) and are not included herein.

For each of the eight scenarios, the following information appears in this volume:

- Floor plan drawing
- Summary of scenario data
- Input file listing for FAST
- Graphs of selected variables (curves labeled with room numbers as shown on the floor plan)
- Printer output from FAST
- Printer output from TENAB
- Floor plan for five compartment version
- Input file listing for FAST with five compartment data
- Printer output from FAST for five compartment case

Since only the five room configurations can be run on the PC, only these FAST input files are provided on the HAZARD I system disks. Thus, these cases can be run by the user and compared with the results obtained on a larger machine.

## LIST OF FIRES

Fire #1	Building:	Ranch
	Fire:	Smoldering Sofa
Fire #2	Building:	Ranch
	Fire:	Grease Fire in Kitchen
Fire #3	Building:	Ranch
	Fire:	Mattress and Bed Linens
Fire #4	Building:	Townhouse
	Fire:	Household Cleaning Materials
Fire #5	Building:	Townhouse
	Fire:	Christmas Tree and Bean Bag
Fire #6	Building:	Two-Story Detached House
	Fire:	Couch and Panelling
Fire #7	Building:	Two-Story Detached House
	Fire:	Couch and Panelling
Fire #8	Building:	Two-Story Detached House
	Fire:	Trash, Drapes and Desk



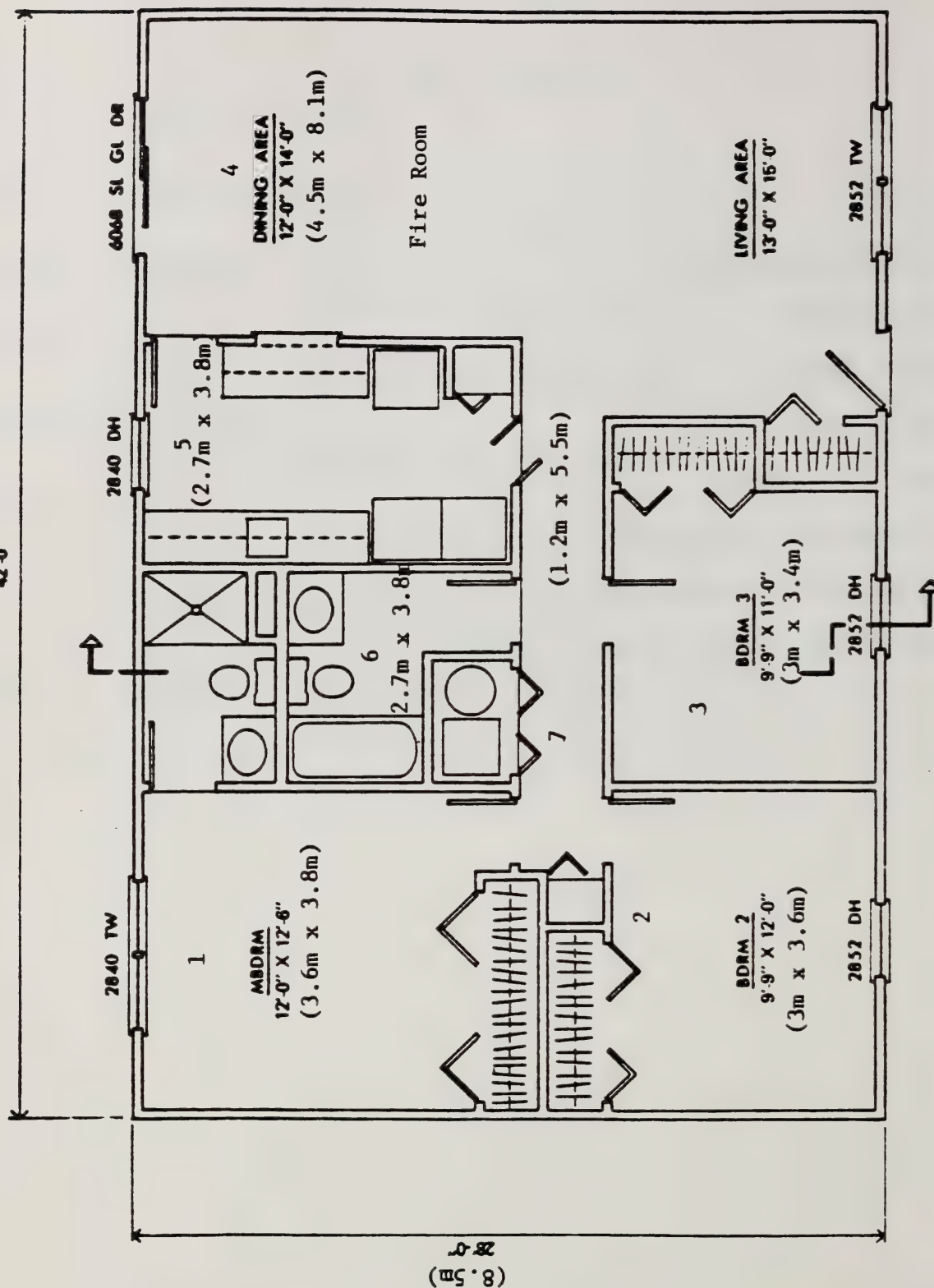
FIRE #1

SMOLDERING SOFA

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I Output - Computer File (5 Compartments)

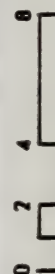
(12.8m)

42' 0"



A - Floor Plan for FIRE #1

# FLOOR PLAN OF A TYPICAL RANCH HOUSE



AUG. 10, 1977

NBS



B. FUEL LOAD BACKGROUND FOR FIRE #1

FIRE #1 - SMOLDERING CIGARETTE IN SOFA

BUILDING: Ranch

OCCUPANT: Male aged 30, sleeping in master bedroom. He has a sleeping penalty (that is, it is difficult for him to wake up) because of alcohol in his blood.

DOORS: All doors are open.

FIRE: Smoldering cigarette in left corner of sofa - smoldering fire followed by flaming fire.

FUEL: Material Code: UP5001  
Material ID: Upholstered sofa, F32, wood frame, PU foam, olefin

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

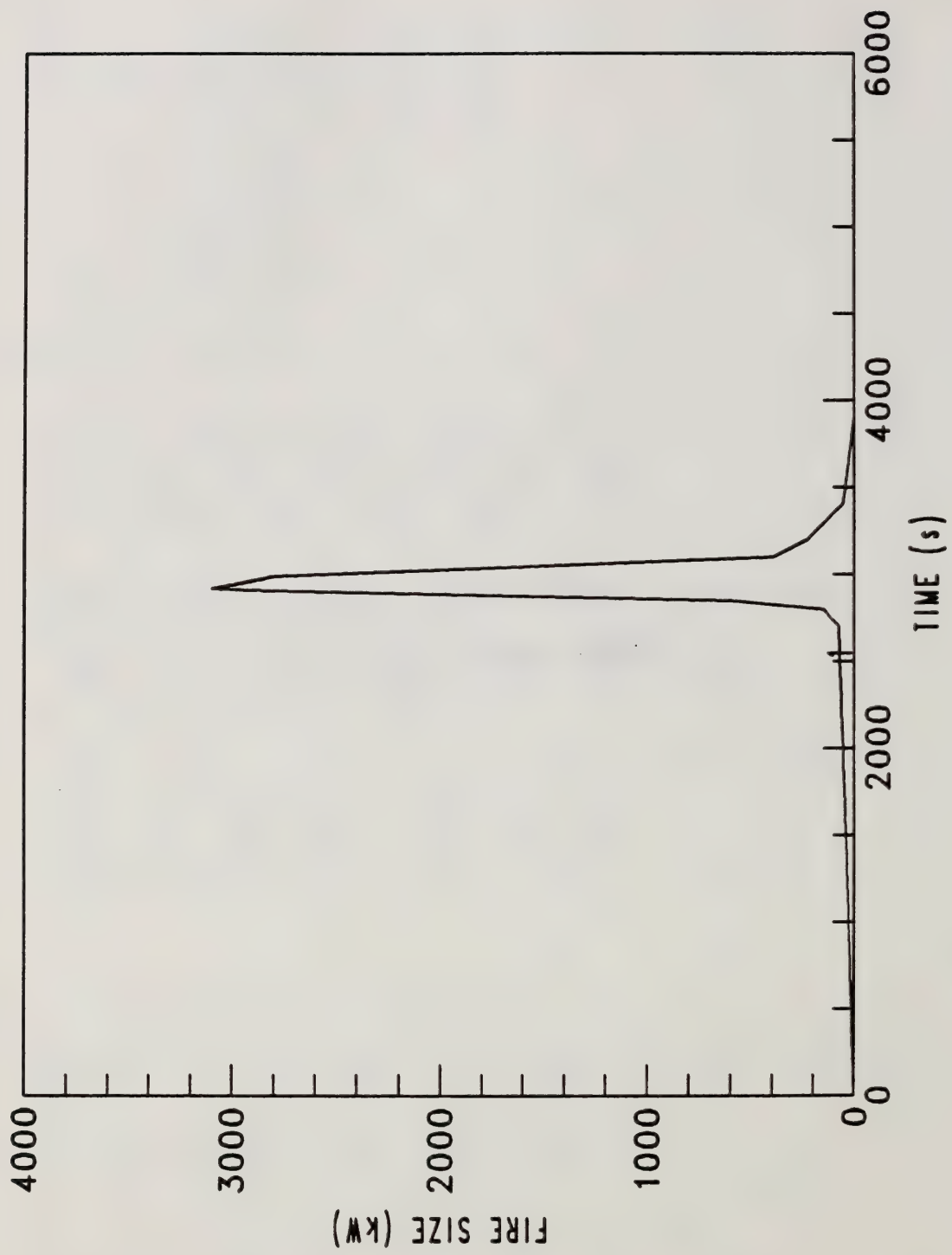
FLOORS: Carpet and pad, see NBSIR 85-3223

FLASHOVER  
TIME: 55 minutes

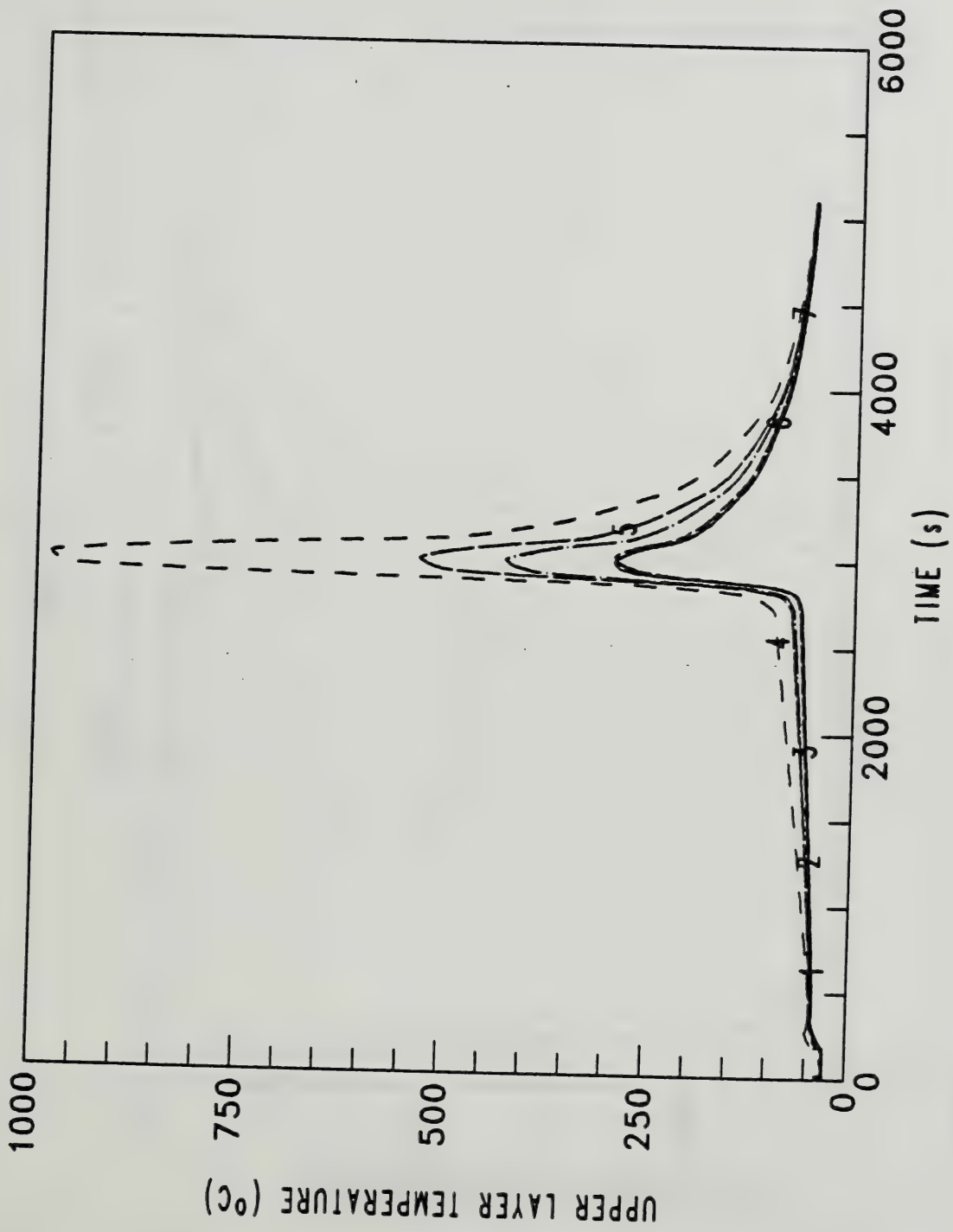
VERSN	017	RANCH SCENARIO 1 SMOLDERING SOFA									
TIMES	5100	500	0	0	0	0	0				
NROOM	7										
NMXOP	1										
TAMB	300										
HI/F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
WIDTH	3.6	3.6	3.3	4.5	2.7	2.7	5.5				
DEPTH	3.8	3.0	3.0	8.1	3.8	3.8	1.2				
HEIGH	2.4	2.4	2.4	2.4	2.4	2.4	2.4				
HVENT	1	7	1.1	2.1	0.0						
HVENT	2	7	1.1	2.1	0.0						
HVENT	3	7	1.1	2.1	0.0						
HVENT	1	8	1.1	0.2	0.0						
HVENT	4	7	1.1	2.1	0.0						
HVENT	4	5	1.1	2.1	0.0						
HVENT	5	7	1.1	2.1	0.0						
HVENT	6	7	1.1	2.1	0.0						
CEILI											
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018			
SPHT	.9	.9	.9	.9	.9	.9	.9				
DNSTY	790	790	790	790	790	790	790				
THICK	.016	.016	.016	.016	.016	.016	.016	.016			
EMISS	.9	.9	.9	.9	.9	.9	.9				
WALLS											
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018			
SPHT	.9	.9	.9	.9	.9	.9	.9				
DNSTY	790	790	790	790	790	790	790				
THICK	.016	.016	.016	.016	.016	.016	.016	.016			
EMISS	.9	.9	.9	.9	.9	.9	.9				
FLOOR											
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001			
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4				
DNSTY	300	300	300	300	300	300	300				
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127			
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
LFBO	4										
LFBT	1										
LFPOS	1										
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	18900	300			
LFMAX	9										
FMASS	.000004	.004	.008	.032	.165	.148	.021	.012	.003	0.0	
FAREA	.03	.6	.8	1.	3.	3.	1.5	1.	.5	.5	
FHIGH	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
FTIME	2700	100	50	65	75	110	100	700	1200		
CO	0.3	0.3	.3	.02	.1	.1	.1	.1	.1	.1	
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	
CO2	6.0	2.0	1.8	.18	.18	.18	.18	.18	.18	.18	
OD	.024	.024	.024	.02	.02	.02	.02	.02	.02	.02	
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	

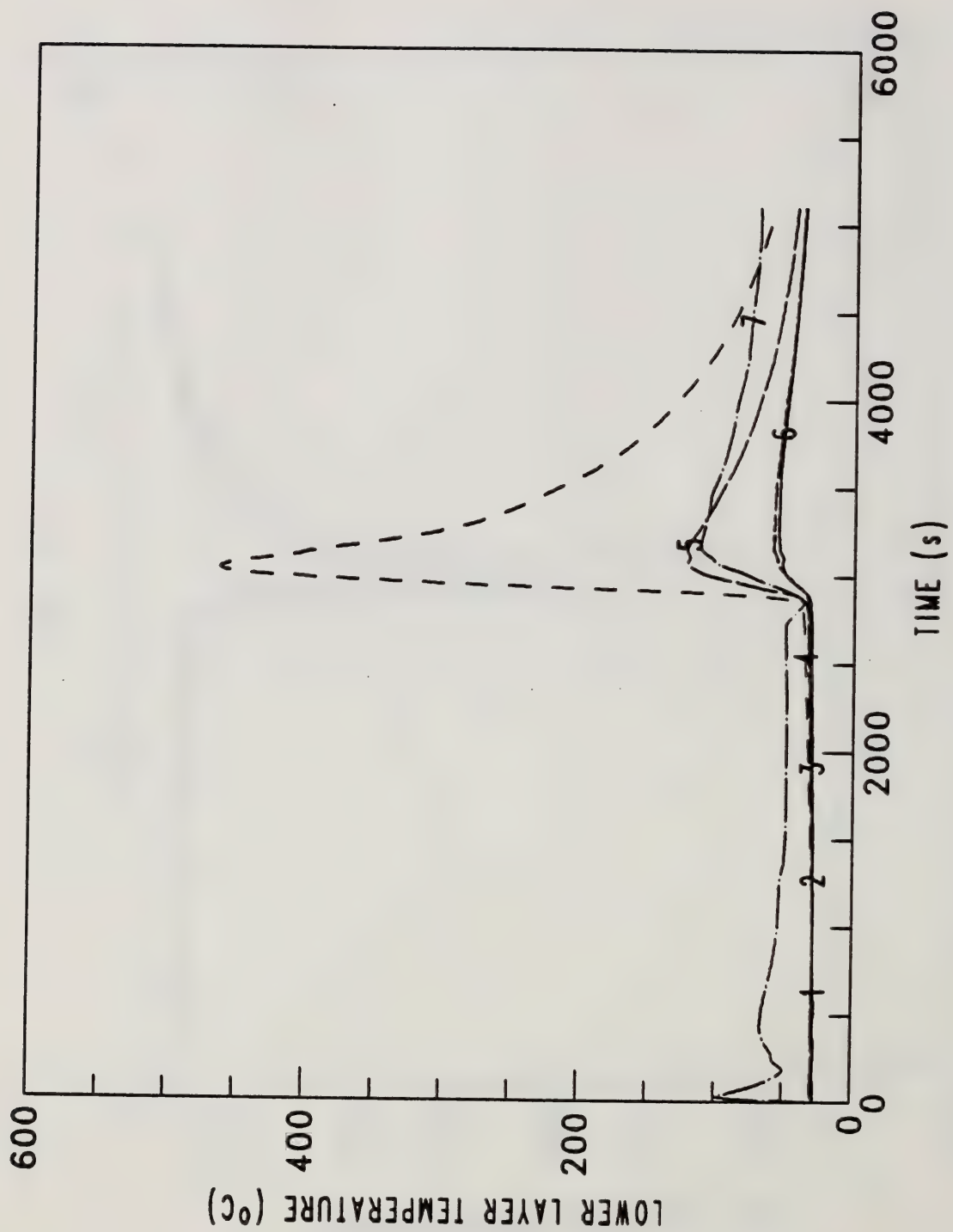


D. OUTPUT - GRAPHS FOR FIRE #1

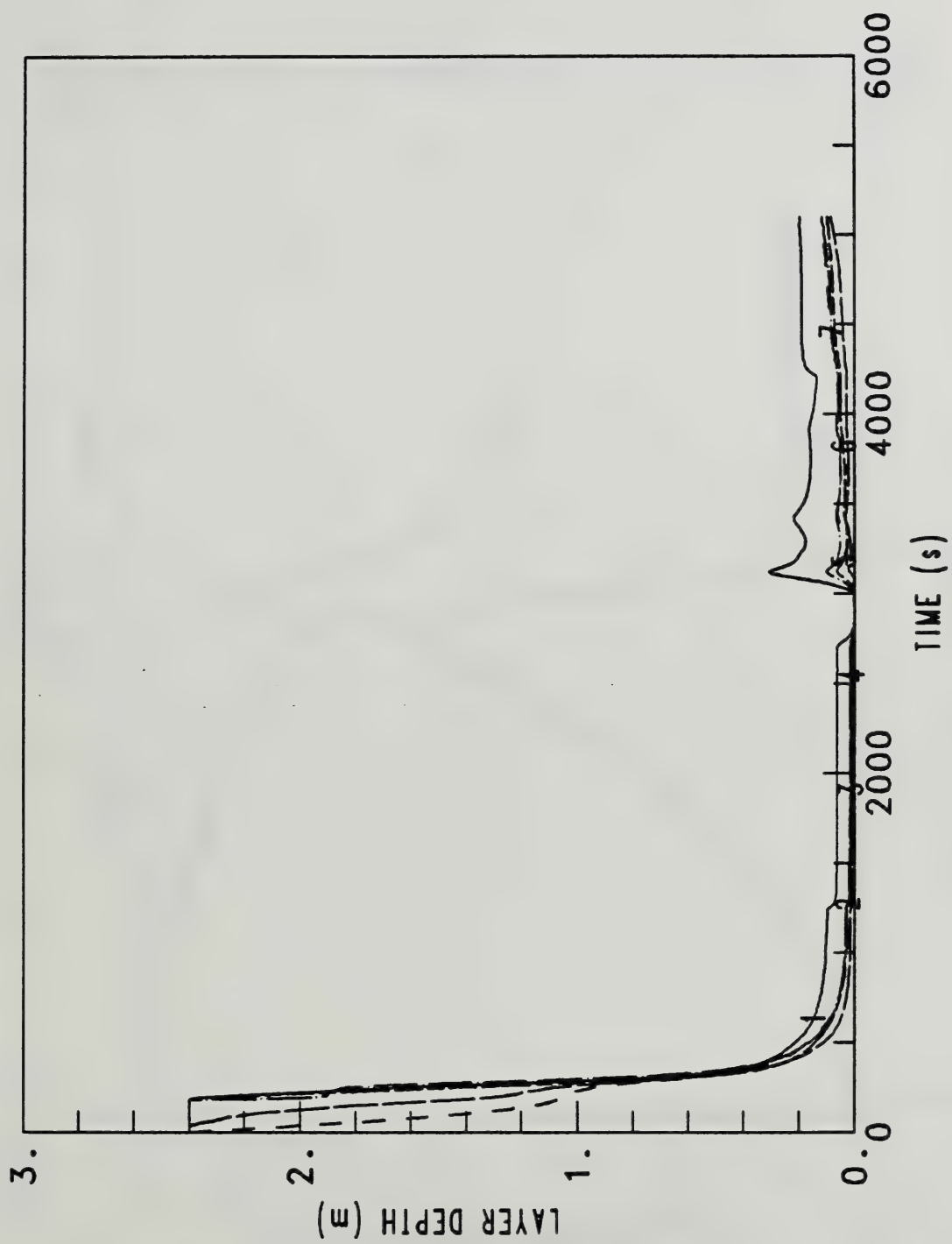


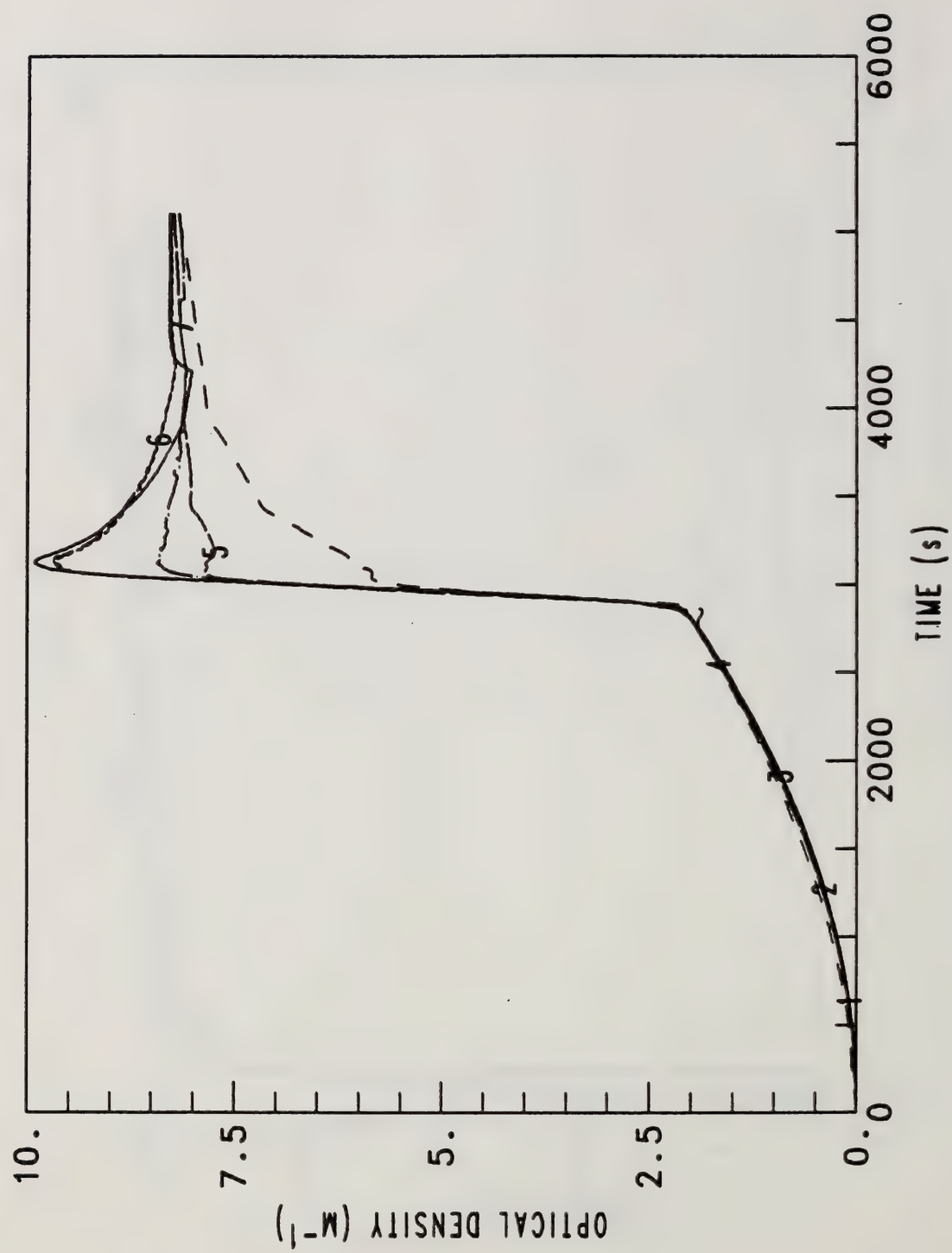




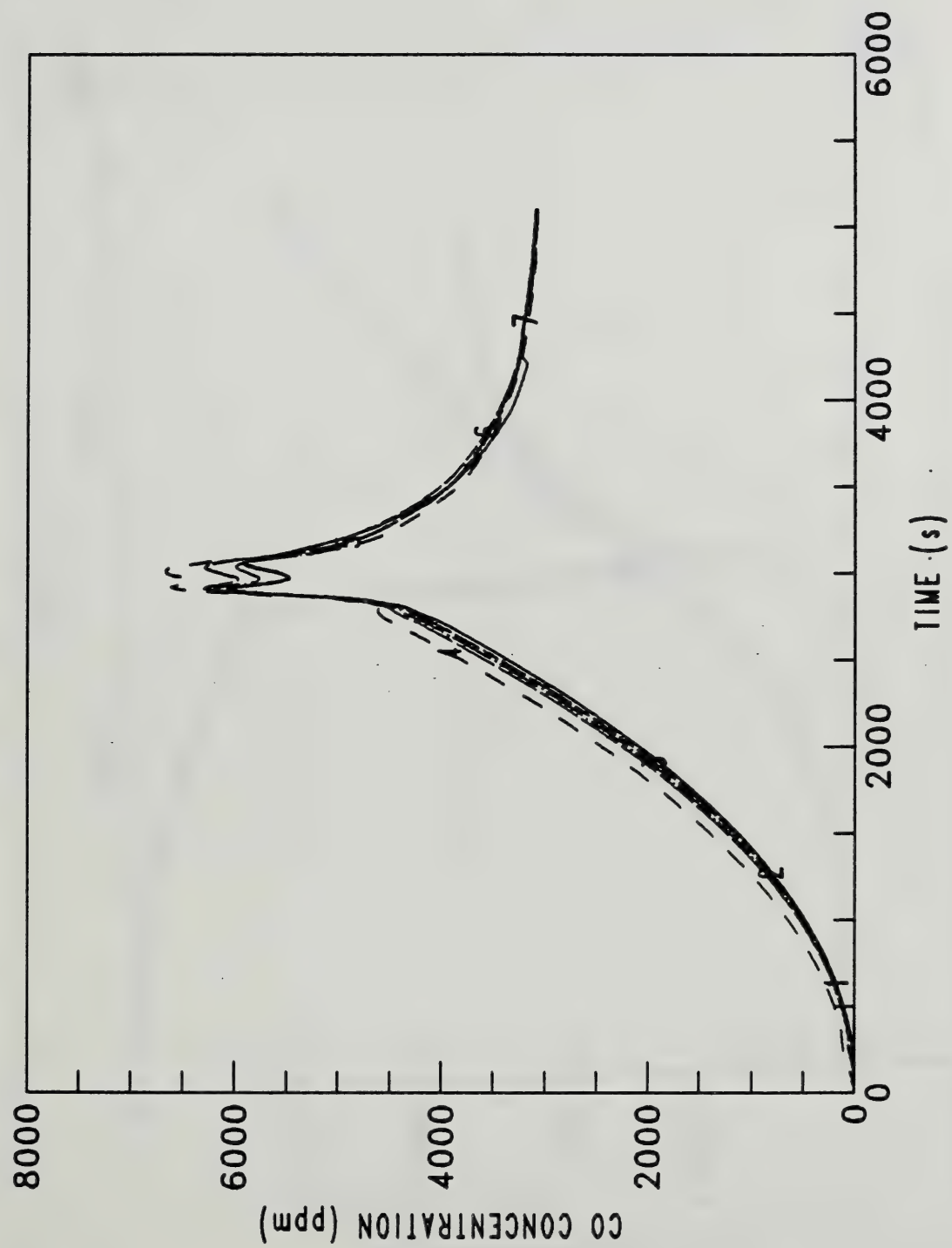


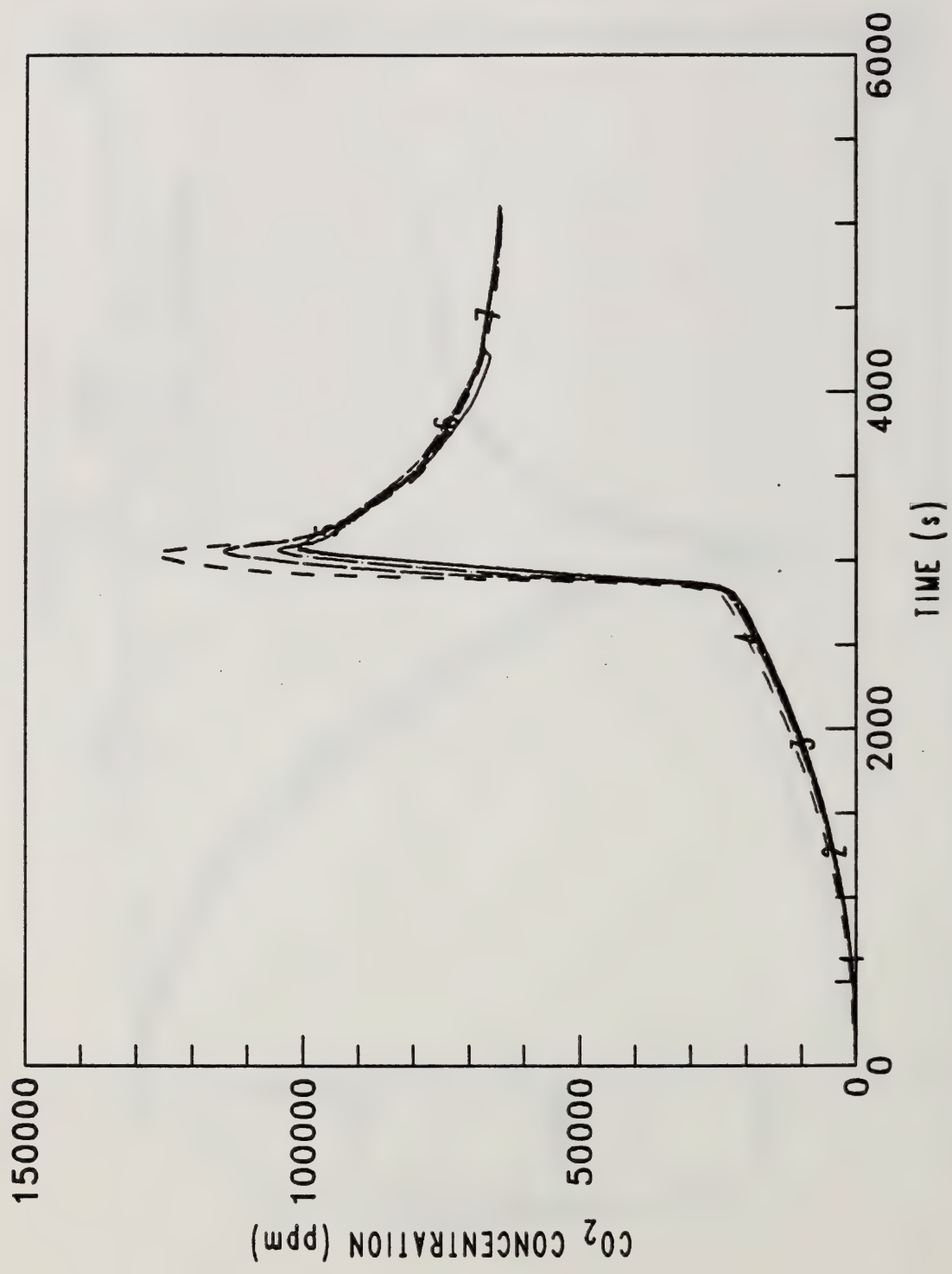




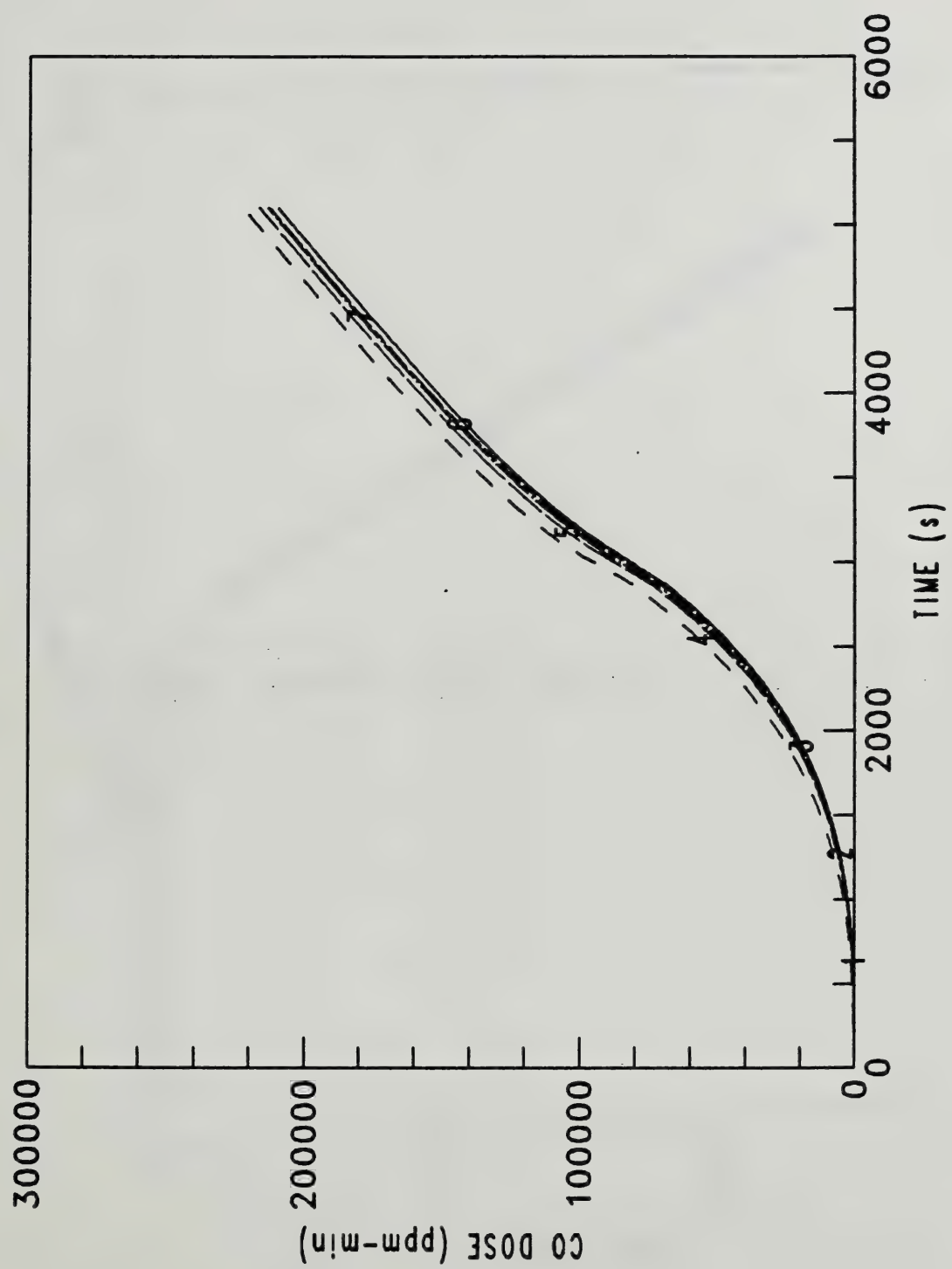


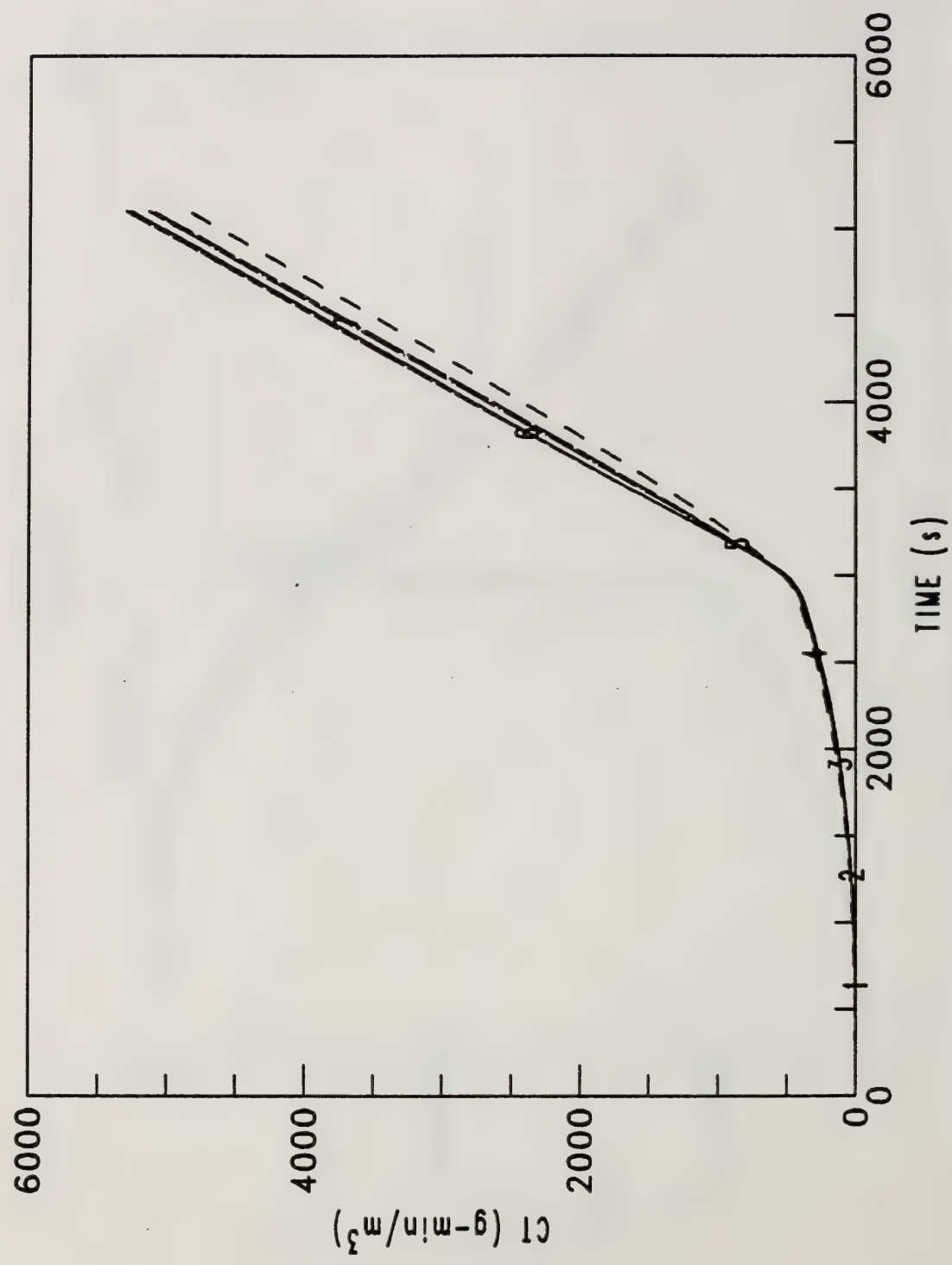














E. OUTPUT - COMPUTER FILE FOR FIRE #1

## RANCH SCENARIO 1 SMOLDERING SOFA

TOTAL COMPARTMENTS = 7  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	3.6	3.3	4.5	2.7	2.7	5.5
DEPTH	3.8	3.8	3.0	8.1	3.8	3.8	1.2
HEIGHT	2.4	2.4	2.4	2.4	2.4	2.4	2.4
AREA	13.7	10.8	9.9	36.4	10.3	10.3	6.6
VOLUME	32.8	25.9	23.8	87.5	24.6	24.6	15.8
CEILING	2.4	2.4	2.4	2.4	2.4	2.4	2.4
FLOOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	1.10	1.10	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 ( 1 )	BW=	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	0.00	0.00	0.00
	HH=	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 4

TIME STEP IS 1.00 SECONDS

PRINT EVERY 500 TIME STEPS

NUMBER OF FIRE INTERVALS = 9

TOTAL TIME INTERVAL = 5100

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18900.

FMASS= 4.00E-06 4.00E-03 8.00E-03 3.20E-02 0.16 0.15 2.10E-02 1.20E-02 3.00E-03 0.00E+00  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
CO2= 6.0 2.0 1.8 0.18 0.18 0.18 0.18 0.18 0.18 0.18  
CO= 0.30 0.30 0.30 2.00E-02 0.10 0.10 0.10 0.10 0.10 0.10  
OD= 2.40E-02 2.40E-02 2.40E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
FTIME= 2.70E+03 1.00E+02 50. 65. 75. 1.10E+02 1.00E+02 7.00E+02 1.20E+03



[illegible]

	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2	/						2.070E+05
CO2	/						0.000E+00
CO	/						0.000E+00
OD	/						0.000E+00
CT	/						0.000E+00

TIME = 500.0 SECONDS.

U. TEMP	302.4	302.5	302.6	318.4	306.6	302.5	308.1
L. TEMP	300.0	300.0	300.0	300.2	300.0	300.0	300.0
UL. VOLUM	19.9	15.6	14.7	57.9	19.6	15.1	9.5
UL. THICK	1.5	1.4	1.5	1.6	1.9	1.5	1.4
CE. TEMP	300.2	300.2	300.2	303.7	300.9	300.2	301.4
UW. TEMP	300.2	300.2	300.2	302.5	300.6	300.2	300.9
LW. TEMP	300.0	300.0	300.0	300.6	300.1	300.0	300.1
FL. TEMP	300.1	300.1	300.1	301.0	300.2	300.1	300.2
PLUME	0.000E+00	0.000E+00	0.000E+00	1.581E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	7.440E-04	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	1.406E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	9.357E-04	1.004E-03	1.034E-03	2.799E-03	2.460E-03	1.022E-03	2.586E-03
	1.233E-03	1.210E-03	1.239E-03	1.715E-02	4.868E-03	1.219E-03	3.942E-03
QSCW	7.127E-03	7.563E-03	7.734E-03	8.829E-02	2.547E-02	7.650E-03	3.158E-02
	-4.506E-05	-4.189E-05	-4.297E-05	-1.887E-03	-2.949E-04	-4.212E-05	-2.914E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.063E+05	2.062E+05	2.062E+05	2.043E+05	2.055E+05	2.062E+05	2.054E+05
CO2 PPM	1.759E+03	1.841E+03	1.878E+03	6.484E+03	3.596E+03	1.863E+03	4.000E+03
CO PPM	148.	155.	158.	560.	304.	157.	342.
OD 1/M	4.659E-02	4.880E-02	4.975E-02	0.168	9.461E-02	4.938E-02	0.106
CT GM/M3	1.13	1.08	1.11	7.16	2.92	1.10	3.97

TIME = 1000.0 SECONDS.

U. TEMP	305.4	305.5	305.7	332.3	317.1	305.6	313.6
L. TEMP	300.6	300.6	300.7	304.4	302.4	300.7	301.5
UL. VOLUM	32.8	25.9	23.7	85.5	24.6	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.3	2.4	2.4	2.4
CE. TEMP	301.0	301.1	301.1	310.1	304.3	301.1	303.6
UW. TEMP	300.7	300.8	300.8	307.2	303.1	300.8	302.6
LW. TEMP	300.3	300.3	300.3	302.8	301.2	300.3	301.0
FL. TEMP	300.5	300.5	300.5	304.6	302.0	300.5	301.6
PLUME	0.000E+00	0.000E+00	0.000E+00	2.827E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.484E-03	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	2.805E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	1.879E-03	1.966E-03	2.036E-03	3.980E-03	5.193E-03	2.009E-03	4.568E-03
	6.108E-03	6.299E-03	6.495E-03	5.110E-02	2.368E-02	6.400E-03	1.958E-02
QSCW	1.783E-02	1.824E-02	1.886E-02	1.478E-01	7.286E-02	1.855E-02	5.296E-02
	5.717E-06	8.233E-06	8.441E-06	-3.848E-04	3.924E-05	8.333E-06	-2.344E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.044E+05	2.043E+05	2.007E+05	2.019E+05	2.043E+05	2.030E+05
CO2	PPM	5.827E+03	6.030E+03	1.346E+04	1.104E+04	6.111E+03	8.800E+03
CO	PPM	528.	548.	1.294E+03	1.039E+03	555.	824.
OD	1/M	0.165	0.171	0.371	0.313	0.173	0.251
CT	GM/M3	11.0	11.4	33.4	23.1	11.6	20.7



TIME = 1500.0 SECONDS.

U. TEMP	311.2	311.6	311.8	350.0	329.6	311.7	323.1
L. TEMP	301.8	301.9	301.9	310.8	305.9	301.9	303.8
UL. VOLUM	32.8	25.9	23.8	87.3	24.6	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	302.9	303.0	303.1	319.6	310.0	303.1	307.8
UW. TEMP	302.1	302.2	302.2	314.3	307.3	302.2	305.7
LW. TEMP	300.9	301.0	301.0	306.8	303.3	301.0	302.5
FL. TEMP	301.6	301.6	301.7	311.0	305.4	301.7	304.2
PLUME	0.000E+00	0.000E+00	0.000E+00	8.594E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	2.224E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	4.203E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	3.207E-03	3.472E-03	3.582E-03	5.028E-03	7.440E-03	3.548E-03	7.059E-03
	1.399E-02	1.459E-02	1.495E-02	8.655E-02	4.531E-02	1.478E-02	3.481E-02
QSCW	4.133E-02	4.302E-02	4.398E-02	2.181E-01	1.257E-01	4.349E-02	9.173E-02
	1.768E-05	1.954E-05	2.058E-05	-3.335E-04	4.746E-05	2.007E-05	-6.650E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.000E+05	1.997E+05	1.996E+05	1.942E+05	1.959E+05	1.997E+05	1.977E+05
CO2	PPM	1.428E+04	1.472E+04	1.493E+04	2.445E+04	2.161E+04	1.485E+04	1.824E+04
CO	PPM	1.438E+03	1.488E+03	1.510E+03	2.630E+03	2.277E+03	1.502E+03	1.898E+03
OD	1/M	0.441	0.455	0.462	0.717	0.659	0.460	0.560
CT	GM/M3	39.4	40.8	41.6	86.9	70.5	41.3	59.8

TIME = 2000.0 SECONDS.

U. TEMP	317.9	318.4	318.7	367.0	341.9	318.6	333.0
L. TEMP	303.8	303.9	304.0	318.6	310.6	304.0	307.1
UL. VOLUM	32.8	25.9	23.8	87.4	24.6	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	305.9	306.1	306.3	330.6	317.3	306.2	313.4
UW. TEMP	304.2	304.4	304.5	322.5	312.7	304.5	309.8
LW. TEMP	302.1	302.1	302.2	312.4	306.5	302.2	304.8
FL. TEMP	303.4	303.5	303.6	318.9	310.2	303.5	307.8
PLUME	0.000E+00	0.000E+00	0.000E+00	8.756E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	2.964E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	5.602E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	4.053E-03	4.479E-03	4.636E-03	4.069E-03	8.670E-03	4.598E-03	8.905E-03
	2.463E-02	2.561E-02	2.614E-02	1.256E-01	7.006E-01	2.588E-02	5.354E-02
QSCW	6.705E-02	6.933E-02	7.051E-02	2.688E-01	1.676E-01	6.988E-02	1.254E-01
	4.171E-05	4.506E-05	4.654E-05	-5.564E-04	4.535E-05	4.577E-05	-1.269E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.926E+05	1.922E+05	1.921E+05	1.858E+05	1.879E+05	1.922E+05	1.901E+05
CO2	PPM	2.604E+04	2.653E+04	2.673E+04	3.559E+04	3.286E+04	2.666E+04	2.974E+04
CO	PPM	2.955E+03	3.020E+03	3.047E+03	4.343E+03	3.920E+03	3.038E+03	3.485E+03
OD	1/M	0.886	0.905	0.912	1.13	1.09	0.909	0.998
CT	GM/M3	104.	107.	109.	178.	157.	108.	136.

TIME = 2500.0 SECONDS.

U.TEMP	325.4	326.1	326.4	384.6	354.9	326.2	343.4
L.TEMP	306.5	306.8	306.9	327.7	316.3	306.8	311.3
UL.VOLUM	32.8	25.9	23.8	87.4	24.6	24.6	15.8
UL.THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE.TEMP	309.9	310.2	310.4	343.0	325.8	310.3	320.0
UW.TEMP	307.2	307.5	307.6	331.6	319.1	307.5	314.8
LW.TEMP	303.8	303.9	304.0	319.6	310.9	304.0	308.0
FL.TEMP	305.9	306.1	306.2	328.2	316.1	306.2	312.2
PLUME	0.000E+00	0.000E+00	0.000E+00	8.870E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	3.704E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	7.001E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	4.480E-03	5.100E-03	5.317E-03	2.409E-03	9.452E-03	5.274E-03	1.045E-02
QSCW	3.778E-02	3.919E-02	3.990E-02	1.716E-01	9.930E-01	3.954E-02	7.585E-02
	9.278E-02	9.542E-02	9.672E-02	3.115E-01	2.038E-01	9.600E-02	1.555E-01
	7.556E-05	8.067E-05	8.274E-05	-8.010E-04	2.069E-05	8.164E-05	-2.082E-03

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.827E+05	1.823E+05	1.821E+05	1.750E+05	1.775E+05	1.822E+05	1.798E+05
CO2	PPM	3.840E+04	3.882E+04	3.899E+04	4.649E+04	4.410E+04	3.893E+04	4.147E+04
CO	PPM	4.987E+03	5.062E+03	5.092E+03	6.546E+03	6.053E+03	5.081E+03	5.570E+03
OD	1/M	1.46	1.48	1.49	1.62	1.63	1.49	1.55
CT	GM/M3	220.	225.	227.	314.	291.	226.	262.

THE FIRE BECAME VENTILATION CONTROLLED AT 2.916E+03 SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 3000.0 SECONDS.

U. TEMP	551.8	551.9	555.1	1311.7	827.3	553.4	705.4
L. TEMP	352.8	354.6	356.2	902.6	472.3	355.5	393.2
UL. VOLUM	32.8	25.9	23.7	87.4	24.6	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	378.6	375.1	376.4	919.0	500.8	375.8	442.3
UW. TEMP	358.2	355.3	356.5	863.2	459.6	355.9	408.9
LW. TEMP	344.3	333.3	334.5	702.9	413.2	333.9	369.5
FL. TEMP	345.4	342.9	344.0	942.3	478.1	343.5	404.7
PLUME	0.000E+00	0.000E+00	0.000E+00	1.554E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.365E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	2.579E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	3.064E-01	3.234E-01	3.347E-01	1.349E+01	2.080E+00	3.296E-01	1.052E+00
	7.917E-01	7.787E-01	7.963E-01	9.749E+00	3.088E+00	7.872E-01	1.916E+00
QSCW	1.694E+00	1.745E+00	1.762E+00	2.751E+00	3.027E+00	1.752E+00	2.524E+00
	1.916E-03	3.520E-03	3.696E-03	-1.519E-01	-1.614E-02	3.623E-03	-5.118E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	6.294E+04	6.243E+04	6.091E+04	0.000E+00	1.418E+04	6.146E+04	4.461E+04
CO2	PPM	5.653E+04	5.659E+04	5.663E+04	6.299E+04	5.976E+04	5.662E+04	5.815E+04
CO	PPM	1.738E+04	1.758E+04	1.777E+04	3.028E+04	2.584E+04	1.770E+04	2.095E+04
OD	1/M	6.42	6.50	6.56	5.17	6.89	6.54	6.30
CT	GM/M3	458.	464.	467.	553.	556.	466.	508.

TIME = 3500.0 SECONDS.

U. TEMP	429.6	432.9	434.0	627.3	530.5	433.4	485.0
L. TEMP	337.5	362.2	363.4	568.5	432.7	362.8	371.0
UL. VOLUM	32.5	25.9	23.8	87.2	24.6	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	377.0	378.8	379.8	614.7	463.3	379.3	423.8
UW. TEMP	359.1	360.8	361.6	563.6	430.1	361.2	396.9
LW. TEMP	343.5	343.5	344.4	541.2	406.1	344.0	374.3
FL. TEMP	351.8	359.9	360.8	596.2	443.1	360.3	394.6
PLUME	0.000E+00	0.000E+00	0.000E+00	3.433E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	8.143E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	1.539E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	8.701E-03	3.133E-02	3.317E-02	-2.357E-01	8.892E-02	3.272E-02	5.890E-02
	3.458E-01	3.007E-01	3.041E-01	9.661E-01	6.155E-01	3.024E-01	5.773E-01
QSCW	3.959E-01	4.079E-01	4.089E-01	4.360E-02	4.729E-01	4.079E-01	4.451E-01
	-8.001E-02	3.848E-04	4.532E-04	-1.350E-01	-4.461E-02	4.247E-04	-1.451E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.702E+04	2.669E+04	2.657E+04	1.937E+04	2.213E+04	2.661E+04	2.459E+04
CO2 PPM	4.772E+04	4.771E+04	4.768E+04	4.674E+04	4.704E+04	4.769E+04	4.736E+04
CO PPM	2.184E+04	2.186E+04	2.186E+04	2.191E+04	2.187E+04	2.186E+04	2.185E+04
OD 1/M	11.3	11.2	11.2	7.77	9.16	11.2	10.00
CT GM/M3	1.690E+03	1.693E+03	1.695E+03	1.342E+03	1.549E+03	1.695E+03	1.584E+03

TIME = 4000.0 SECONDS.

U. TEMP	405.6	408.2	409.0	528.4	474.0	408.6	443.3
L. TEMP	338.6	363.5	364.5	519.1	419.4	364.0	368.0
UL. VOLUM	32.5	25.9	23.8	86.4	24.5	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	378.0	380.5	381.5	571.2	453.7	381.0	419.9
UW. TEMP	357.6	360.0	360.7	482.5	413.3	360.4	368.5
LW. TEMP	348.6	350.2	351.1	533.9	411.0	350.7	381.1
FL. TEMP	352.9	361.8	362.7	539.7	428.3	362.2	389.2
PLUME	0.000E+00	0.000E+00	0.000E+00	3.129E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	2.750E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	5.197E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	-3.121E-02	-1.068E-02	-9.761E-03	-5.502E-01	-6.173E-02	-9.746E-03	-2.745E-02
QSCW	3.021E-01	2.531E-01	2.561E-01	9.843E-01	5.257E-01	2.546E-01	4.879E-01
	1.721E-01	1.722E-01	1.710E-01	-1.435E-02	1.021E-01	1.712E-01	1.297E-01
	-7.942E-02	2.452E-04	2.896E-04	-9.706E-02	-3.674E-02	2.715E-04	-1.269E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.105E+04	2.119E+04	2.122E+04	2.328E+04	2.222E+04	2.121E+04	2.201E+04
CO2 PPM	4.495E+04	4.496E+04	4.493E+04	4.333E+04	4.396E+04	4.494E+04	4.439E+04
CO PPM	2.137E+04	2.139E+04	2.138E+04	2.081E+04	2.103E+04	2.138E+04	2.118E+04
OD 1/M	11.8	11.7	11.7	8.79	9.90	11.7	10.7
CT CM/M3	3.050E+03	3.046E+03	3.044E+03	2.324E+03	2.679E+03	3.046E+03	2.806E+03



TIME = 4500.0 SECONDS.

U. TEMP	391.6	393.9	394.5	483.5	444.6	394.1	421.0
L. TEMP	339.1	363.4	364.6	481.1	409.4	364.1	366.6
UL. VOLUM	32.4	25.9	23.8	86.3	24.5	24.6	15.8
UL. THICK	2.4	2.4	2.4	2.4	2.4	2.4	2.4
CE. TEMP	376.3	379.1	380.0	541.8	443.2	379.5	414.0
UW. TEMP	353.5	355.9	356.5	430.5	396.1	356.2	378.2
LW. TEMP	351.4	353.8	354.7	512.7	411.5	354.3	383.6
FL. TEMP	352.3	360.2	360.9	495.8	416.3	360.6	384.4
PLUME	0.000E+00	0.000E+00	0.000E+00	2.110E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.500E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	2.835E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	-4.485E-02	-2.905E-02	-2.842E-02	-4.834E-01	-1.012E-01	-2.826E-02	-5.243E-02
	2.688E-01	2.317E-01	2.344E-01	7.213E-01	4.697E-01	2.331E-01	4.212E-01
	7.999E-02	7.585E-02	7.430E-02	-2.287E-02	2.858E-03	7.476E-02	2.683E-02
QSCW	-7.167E-02	6.022E-04	7.082E-04	-6.583E-02	-2.667E-02	6.653E-04	-1.006E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.484E+04	2.501E+04	2.505E+04	2.681E+04	2.591E+04	2.503E+04	2.573E+04
CO2 PPM	4.268E+04	4.271E+04	4.269E+04	4.157E+04	4.201E+04	4.269E+04	4.228E+04
CO PPM	2.058E+04	2.061E+04	2.060E+04	2.018E+04	2.034E+04	2.060E+04	2.044E+04
OD 1/M	11.7	11.7	11.7	9.33	10.2	11.7	10.9
CT GM/M3	4.430E+03	4.419E+03	4.414E+03	3.392E+03	3.863E+03	4.418E+03	4.071E+03

TIME = 5000.0 SECONDS.

U. TEMP	377.4	379.2	379.7	440.3	415.8	379.4	398.7
L. TEMP	334.1	357.8	358.5	445.3	396.4	358.2	357.0
UL. VOLUM	32.2	25.9	23.8	83.0	24.5	24.6	15.7
UL. THICK	2.4	2.4	2.4	2.3	2.4	2.4	2.4
CE. TEMP	372.6	375.5	376.3	515.1	433.5	375.9	407.4
UW. TEMP	347.9	350.2	350.7	393.0	379.4	350.5	367.1
LW. TEMP	350.7	354.7	355.6	485.5	407.5	355.2	380.2
FL. TEMP	347.6	357.0	357.6	457.5	403.4	357.3	374.4
PLUME	0.000E+00	0.000E+00	0.000E+00	1.113E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	2.500E-04	0.000E-04	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	4.725E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-5.165E-02	-4.096E-02	-4.058E-02	-4.554E-01	-1.241E-01	-4.034E-02	-6.873E-02
	2.238E-01	2.057E-01	2.082E-01	5.598E-01	3.892E-01	2.070E-01	3.425E-01
QSCW	1.721E-02	1.239E-02	1.099E-02	-3.373E-02	-5.255E-03	1.145E-02	-2.103E-03
	-7.500E-02	1.003E-04	1.160E-04	-5.360E-02	-2.818E-02	1.101E-04	-9.991E-02

UPPER LAYER SPECIES CONCENTRATION

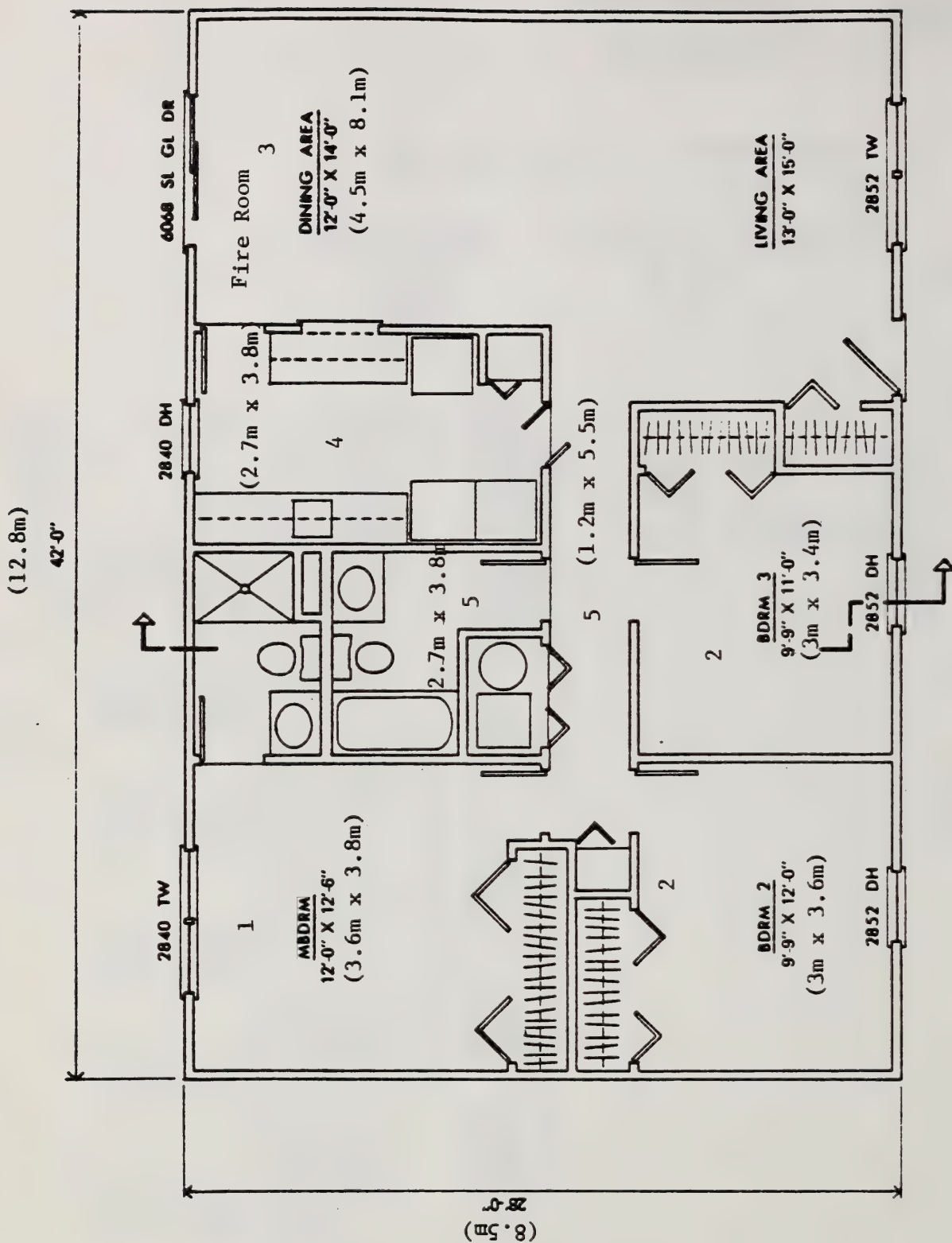
O2 PPM	3.019E+04	3.049E+04	3.056E+04	3.378E+04	3.231E+04	3.054E+04	3.191E+04
CO2 PPM	4.092E+04	4.094E+04	4.092E+04	3.983E+04	4.024E+04	4.093E+04	4.046E+04
CO PPM	1.987E+04	1.988E+04	1.987E+04	1.939E+04	1.958E+04	1.988E+04	1.967E+04
OD 1/M	11.8	11.7	11.7	9.85	10.5	11.7	11.0
CT GM/M3	5.814E+03	5.796E+03	5.789E+03	4.518E+03	5.084E+03	5.794E+03	5.358E+03

INPUT FAST FILE : SYS:RAS11B.DMP/G  
INPUT EXITT FILE : C:  
TENABS OUTPUT FILE: SCENONEB.TEN

OCCUPANT 1 ROOM NUMBER ENTER TIME (S)  
1 0

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON	1						
TIME	ROOM	CONDITION	CAUSE	TEMP	FLUX	FED	CT
(MIN)				(C)	(KW-MIN/M2)		(G-MIN/M3)
45.	1	INCAPACITATED	TEMP	65.1	0.2	0.23	322.
48.	1	DEAD	TEMP	116.4	0.3	0.35	390.
49.	1	INCAPACITATED	CT	291.8	0.7	0.49	458.
50.	1	INCAPACITATED	FED	293.6	0.8	0.51	469.
53.	1	DEAD	CT	189.8	1.5	0.86	911.
55.	1	DEAD	FED	163.3	1.5	1.00	1171.
85.	1	FINAL TIME		55.9	2.0	2.28	5270.



G - Floor Plan for FIRE #1  
(5 Compartments)

# FLOOR PLAN OF A TYPICAL RANCH HOUSE

AUG. 10, 1977

NBS



VERSN 017 RANCH SCENARIO 1 SMOLDERING SOFA IN LR 5ROOMS  
 TIMES 5100 500 0 0 0 .1  
 NROOM 5  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 0.0 0.0 0.0 0.0  
 WIDTH 3.6 7.0 4.5 2.7 2.1  
 DEPTH 3.8 3.0 8.1 3.8 8.4  
 HEIGH 2.4 2.4 2.4 2.4 2.4  
 HVENT 1 5 1.1 2.1 0.0  
 HVENT 2 5 2.2 2.1 0.0  
 HVENT 3 5 1.1 2.1 0.0  
 HVENT 1 6 1.1 0.2 0.0  
 HVENT 3 4 1.1 2.1 0.0  
 HVENT 4 5 1.1 2.1 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790. 790. 790. 790. 790.  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0  
 LFBO 3  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 18900 300  
 LFMAX 9  
 FMASS .000004 .004 .008 .032 .165 .148 .021 .012 .003 0.0  
 FAREA .03 .6 .8 1. 3. 3. 1.5 1. .5 .5  
 FHIGH .0 .0 .0 .0 .0 .0 .0 .0 .0 .0  
 FTIME 2700 100 50 65 75 110 100 700 1200  
 CO 0.3 0.3 .30 .02 .1 .1 .1 .1 .1 .1  
 CO2 6.0 2.0 1.8 .18 .18 .18 .18 .18 .18 .18  
 OD .024 .024 .024 .02 .02 .02 .02 .02 .02 .02  
 CT 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.  
 O2 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -.14

H - INPUT FOR FAST (5 COMPARTMENTS)



I. OUTPUT - COMPUTER FILE FOR FIRE #1 (5 Compartments)

## RANCH SCENARIO 1 SMOLDERING SOFA IN LR 5ROOMS

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	7.0	4.5	2.7	2.1
DEPTH	3.8	3.0	8.1	3.8	8.4
HEIGHT	2.4	2.4	2.4	2.4	2.4
AREA	13.7	21.0	36.4	10.3	17.6
VOLUME	32.8	50.4	87.5	24.6	42.3
CEILING	2.4	2.4	2.4	2.4	2.4
FLOOR <sub>1</sub>	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

	1 ( 1 )	2 ( 1 )	3 ( 1 )	4 ( 1 )	5 ( 1 )
BW=	0.00	0.00	0.00	0.00	1.10
HH=	0.00	0.00	0.00	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00
BW=	0.00	0.00	0.00	0.00	1.10
HH=	0.00	0.00	0.00	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00
BW=	0.00	0.00	0.00	0.00	1.10
HH=	0.00	0.00	0.00	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00
BW=	1.10	2.20	1.10	1.10	0.00
HH=	2.10	0.00	2.10	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

## FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02



THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 3

TIME STEP IS 1.00 SECONDS

PRINT EVERY 500 TIME STEPS

NUMBER OF FIRE INTERVALS = 9

TOTAL TIME INTERVAL = 5100

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18900.

FMASS= 4.00E-06 4.00E-03 8.00E-03 3.20E-02 0.15 2.10E-02 1.20E-02 3.00E-03 0.00E+00  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
CO2= 6.0 2.0 1.8 0.18 0.18 0.18 0.18 0.18 0.18  
CO= 0.30 0.30 0.30 2.00E-02 0.10 0.10 0.10 0.10 0.10  
OD= 2.40E-02 2.40E-02 2.40E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
FTIME= 2.70E+03 1.00E+02 50. 65. 75. 1.10E+02 1.00E+02 7.00E+02 1.20E+03

TIME = 0.0 SECONDS.

U.TEMP	300.0	300.0	300.0	300.0	300.0
L.TEMP	300.0	300.0	300.0	300.0	300.0
UL.VOLUM	0.0	0.0	0.0	0.0	0.0
UL.THICK	0.0	0.0	0.0	0.0	0.0
CE.TEMP	300.0	300.0	300.0	300.0	300.0
UW.TEMP	300.0	300.0	300.0	300.0	300.0
LW.TEMP	300.0	300.0	300.0	300.0	300.0
FL.TEMP	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 500.0 SECONDS.

U. TEMP	301.5	301.1	318.3	306.7	306.1
L. TEMP	300.0	300.0	300.2	300.1	300.0
UL. VOLUM	18.9	23.5	59.9	20.3	28.8
UL. THICK	1.4	1.1	1.6	2.0	1.6
CE. TEMP	300.1	300.1	303.7	300.9	300.8
UW. TEMP	300.1	300.0	302.5	300.6	300.6
LW. TEMP	300.0	300.0	300.6	300.2	300.1
FL. TEMP	300.0	300.0	301.0	300.3	300.2
PLUME	0.000E+00	0.000E+00	1.388E-01	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	7.440E-04	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	1.406E+01	0.000E+00	0.000E+00
QSRW	6.287E-04	4.796E-04	2.898E-03	2.506E-03	2.077E-03
	6.724E-04	4.595E-04	1.747E-02	5.182E-03	3.849E-03
QSCW	3.838E-03	2.713E-03	8.764E-02	2.573E-02	2.298E-02
	-1.857E-05	-1.053E-05	-1.866E-03	-2.960E-04	-2.411E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.066E+05	2.067E+05	2.043E+05	2.055E+05	2.055E+05
CO2 PPM	1.137E+03	845.	6.529E+03	3.644E+03	3.407E+03
CO PPM	94.9	70.7	564.	308.	288.
OD 1/M	3.003E-02	2.239E-02	0.169	9.586E-02	8.974E-02
CT GM/M3	0.667	0.431	7.18	2.94	2.72

TIME = 1000.0 SECONDS.

U. TEMP	304.9	305.1	331.7	316.9	312.8
L. TEMP	300.5	300.4	303.4	301.9	301.1
UL. VOLUM	32.8	49.7	83.1	24.5	42.0
UL. THICK	2.4	2.4	2.3	2.4	2.4
CE. TEMP	300.9	300.9	310.1	304.3	303.2
LW. TEMP	300.6	300.6	307.2	303.1	302.3
LW. TEMP	300.2	300.2	302.7	301.1	300.8
FL. TEMP	300.4	300.4	304.4	301.9	301.4
PLUME	0.000E+00	0.000E+00	4.377E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	1.484E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	2.805E+01	0.000E+00	0.000E+00
QSRW	1.789E-03	1.788E-03	3.003E-03	4.962E-03	3.569E-03
QSCW	5.376E-03	5.612E-03	4.955E-02	2.349E-02	1.738E-02
	1.604E-02	1.726E-02	1.435E-01	7.123E-02	5.014E-02
	4.755E-06	-3.455E-05	-2.326E-03	-9.206E-05	-4.744E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.045E+05	2.045E+05	2.008E+05	2.019E+05	2.030E+05
CO2	PPM	5.645E+03	5.762E+03	1.317E+04	1.109E+04	8.758E+03
CO	PPM	509.	521.	1.267E+03	1.043E+03	817.
OD	1/M	0.159	0.163	0.364	0.314	0.249
CT	GM/M3	9.49	9.19	33.6	23.5	19.8



TIME = 1500.0 SECONDS.

U. TEMP	310.5	311.3	349.4	329.1	322.2
L. TEMP	301.6	301.6	310.5	305.6	303.8
UL. VOLUM	32.8	50.3	87.3	24.6	42.3
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	302.6	302.8	319.3	309.9	307.2
UW. TEMP	301.9	302.0	314.1	307.1	305.2
LW. TEMP	300.8	300.9	306.7	303.2	302.3
FL. TEMP	301.4	301.5	310.8	305.3	303.9
PLUME	0.000E+00	0.000E+00	9.151E-03	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	2.224E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	4.203E+01	0.000E+00	0.000E+00
QSRW	3.127E-03	3.154E-03	4.805E-03	7.289E-03	5.378E-03
	1.295E-02	1.413E-02	8.566E-02	4.450E-02	3.238E-02
QSCW	3.886E-02	4.285E-02	2.151E-01	1.232E-01	8.961E-02
	1.549E-05	1.288E-05	-4.046E-04	2.420E-05	-1.463E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.002E+05	2.001E+05	1.945E+05	1.962E+05	1.979E+05
CO2	PPM	1.382E+04	1.416E+04	2.391E+04	2.107E+04	1.783E+04
CO	PPM	1.387E+03	1.425E+03	2.571E+03	2.218E+03	1.850E+03
OD	1/M	0.426	0.436	0.702	0.643	0.547
CT	GM/M3	36.9	37.3	85.8	69.8	57.9

TIME = 2000.0 SECONDS.

U. TEMP	317.3	318.5	366.4	341.5	332.2
L. TEMP	303.5	303.7	318.3	310.2	307.2
UL. VOLUM	32.8	50.4	87.4	24.6	42.3
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	305.5	306.0	330.3	317.0	312.6
UW. TEMP	304.0	304.3	322.3	312.5	309.2
LW. TEMP	301.9	302.0	312.2	306.4	304.6
FL. TEMP	303.1	303.4	318.7	310.0	307.4
PLUME	0.000E+00	0.000E+00	9.047E-03	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	2.964E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	5.602E+01	0.000E+00	0.000E+00
QSRW	4.054E-03	3.915E-03	3.988E-03	8.586E-03	6.308E-03
	2.355E-02	2.549E-02	1.244E-01	6.918E-02	5.077E-02
	6.520E-02	7.088E-02	2.668E-01	1.659E-01	1.252E-01
QSCW	3.899E-05	3.788E-05	-6.272E-04	1.639E-05	-2.587E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.929E+05	1.927E+05	1.861E+05	1.882E+05	1.903E+05
CO2	PPM	/	2.550E+04	2.586E+04	3.505E+04	3.234E+04	2.923E+04
CO	PPM	/	2.883E+03	2.932E+03	4.273E+03	3.853E+03	3.415E+03
OD	1/M	/	0.867	0.878	1.11	1.08	0.980
CT	GM/M3	/	99.8	101.	175.	154.	133.

TIME = 2500.0 SECONDS.

U. TEMP	324.9	326.5	384.1	354.5	342.9
L. TEMP	306.2	306.7	327.4	315.9	311.5
UL. VOLUM	32.8	50.4	87.4	24.6	42.3
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	309.5	310.2	342.7	325.6	319.3
UW. TEMP	306.9	307.4	331.4	318.9	314.2
LW. TEMP	303.6	303.9	319.4	310.7	307.7
FL. TEMP	305.6	306.0	327.9	315.9	311.8
PLUME	0.000E+00	0.000E+00	9.185E-03	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	3.704E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	7.001E+01	0.000E+00	0.000E+00
QSRW	4.564E-03	4.184E-03	2.433E-03	9.431E-03	6.753E-03
	3.683E-02	3.961E-02	1.704E-01	9.839E-02	7.284E-02
QSCW	9.203E-02	9.902E-02	3.106E-01	2.029E-01	1.576E-01
	7.297E-05	7.434E-05	-8.860E-04	-7.056E-06	-3.930E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.831E+05	1.828E+05	1.755E+05	1.779E+05	1.802E+05
CO2 PPM	3.784E+04	3.815E+04	4.591E+04	4.355E+04	4.092E+04
CO PPM	4.901E+03	4.955E+03	6.459E+03	5.968E+03	5.482E+03
OD 1/M	1.44	1.45	1.60	1.61	1.52
CT GM/M3	213.	216.	309.	287.	256.

THE FIRE BECAME VENTILATION CONTROLLED AT 2.917E+03 SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 3000.0 SECONDS.

U. TEMP	550.8	558.9	1308.5	826.3	702.3
L. TEMP	356.1	375.0	874.4	469.1	399.1
UL. VOLUM	32.8	50.3	87.4	24.6	42.2
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	378.1	376.4	912.1	500.2	439.3
UW. TEMP	357.8	356.2	856.2	459.0	406.1
LW. TEMP	344.5	330.9	701.7	407.7	364.3
FL. TEMP	344.9	343.2	934.9	476.1	402.7
PLUME	0.000E+00	0.000E+00	1.674E-01	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	1.365E-01	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	2.579E+03	0.000E+00	0.000E+00
QSRW	3.035E-01	3.281E-01	1.338E+01	2.062E+00	9.819E-01
	7.871E-01	8.138E-01	9.894E+00	3.098E+00	1.864E+00
QSCW	1.689E+00	1.806E+00	2.793E+00	3.025E+00	2.532E+00
	3.284E-03	1.275E-02	-2.726E-01	-2.149E-02	-9.618E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	5.798E+04	5.875E+04	0.000E+00	1.265E+04	3.973E+04
CO2 PPM	5.523E+04	5.523E+04	5.929E+04	5.643E+04	5.593E+04
CO PPM	1.715E+04	1.720E+04	2.910E+04	2.484E+04	2.052E+04
OD 1/M	6.40	6.31	5.01	6.67	6.24
CT GM/M3	450.	449.	545.	548.	500.



TIME = 3500.0 SECONDS.

U. TEMP	431.1	438.0	628.6	531.8	487.6
L. TEMP	337.4	362.0	568.2	434.6	383.4
UL. VOLUM	32.5	50.4	87.2	24.6	42.2
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	377.3	381.1	613.7	463.7	423.2
UW. TEMP	359.3	362.5	562.8	430.5	396.1
LW. TEMP	343.5	343.3	540.9	404.8	372.3
FL. TEMP	351.9	361.8	595.3	443.7	398.3
PLUME	0.000E+00	0.000E+00	3.509E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	8.143E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	1.539E+02	0.000E+00	0.000E+00
QSRW	1.020E-02	2.635E-02	-2.201E-01	9.346E-02	4.504E-02
QSCW	3.509E-01	3.142E-01	9.681E-01	6.152E-01	5.265E-01
	4.070E-01	4.336E-01	5.455E-02	4.817E-01	4.752E-01
	-8.140E-02	1.717E-05	-1.312E-01	-3.740E-02	-7.718E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.470E+04	2.449E+04	1.734E+04	2.003E+04	2.231E+04
CO2 PPM	4.604E+04	4.603E+04	4.507E+04	4.535E+04	4.569E+04
CO PPM	2.164E+04	2.166E+04	2.170E+04	2.166E+04	2.165E+04
OD 1/M	11.2	11.0	7.73	9.10	9.92
CT GM/M3	1.683E+03	1.666E+03	1.328E+03	1.535E+03	1.574E+03

TIME = 4000.0 SECONDS.

U. TEMP	407.8	413.1	530.9	476.3	446.8
L. TEMP	338.8	364.1	519.1	421.7	379.6
UL. VOLUM	32.4	50.4	86.3	24.5	42.1
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	378.8	383.1	570.7	454.6	419.7
UW. TEMP	358.3	361.8	483.2	414.2	388.2
LW. TEMP	348.9	350.5	533.6	410.6	379.6
FL. TEMP	353.4	364.1	539.4	429.5	393.2
PLUME	0.000E+00	0.000E+00	3.314E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	2.750E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	5.197E+01	0.000E+00	0.000E+00
QSRW	-3.016E-02	-1.788E-02	-5.371E-01	-5.779E-02	-4.322E-02
QSCW	3.093E-01	2.650E-01	9.831E-01	5.278E-01	4.415E-01
	1.832E-01	1.903E-01	-1.301E-02	1.112E-01	1.565E-01
	-8.212E-02	3.300E-06	-9.516E-02	-3.104E-02	-6.883E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.805E+04	1.813E+04	2.085E+04	1.954E+04	1.901E+04
CO2	PPM	4.344E+04	4.347E+04	4.178E+04	4.244E+04	4.286E+04
CO	PPM	2.121E+04	2.123E+04	2.060E+04	2.085E+04	2.100E+04
OD	1/M	11.7	11.5	8.71	9.83	10.5
CT	GM/M3	3.034E+03	2.999E+03	2.304E+03	2.658E+03	2.786E+03

TIME = 4500.0 SECONDS.

U.TEMP	393.9	398.3	486.1	447.0	424.4
L.TEMP	339.5	362.7	482.0	411.8	376.4
UL.VOLUM	32.4	50.4	86.2	24.5	42.1
UL.THICK	2.4	2.4	2.4	2.4	2.4
CE.TEMP	377.4	381.7	541.7	444.3	413.8
UW.TEMP	354.3	357.6	431.7	397.2	378.1
LW.TEMP	352.0	354.4	512.7	411.5	382.6
FL.TEMP	353.1	362.4	496.1	417.7	387.5
PLUME	0.000E+00	0.000E+00	2.152E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	1.500E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	2.835E+01	0.000E+00	0.000E+00
QSRW	-4.456E-02	-3.750E-02	-4.748E-01	-9.872E-02	-6.941E-02
	2.761E-01	2.422E-01	7.227E-01	4.729E-01	3.869E-01
QSCW	8.780E-02	8.827E-02	-2.140E-02	7.031E-03	4.604E-02
	-7.426E-02	2.133E-05	-6.227E-02	-2.170E-02	-5.318E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.202E+04	2.210E+04	2.429E+04	2.329E+04	2.283E+04
CO2	PPM	4.116E+04	4.118E+04	4.005E+04	4.049E+04	4.077E+04
CO	PPM	2.038E+04	2.040E+04	1.996E+04	2.013E+04	2.024E+04
OD	1/M	11.6	11.5	9.23	10.1	10.7
CT	GM/M3	4.403E+03	4.353E+03	3.362E+03	3.832E+03	4.037E+03

TIME = 5000.0 SECONDS.

U. TEMP	379.6	383.3	442.9	418.3	402.1
L. TEMP	334.5	359.3	446.1	399.2	367.4
UL. VOLUM	32.2	50.4	82.7	24.5	42.0
UL. THICK	2.4	2.4	2.3	2.4	2.4
CE. TEMP	373.8	377.9	515.2	434.6	406.4
UW. TEMP	348.9	351.8	394.5	380.6	367.0
LW. TEMP	351.5	355.7	485.7	408.3	381.2
FL. TEMP	348.5	359.1	457.9	405.4	378.9
PLUME	0.000E+00	0.000E+00	1.163E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	2.500E-04	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	4.725E+00	0.000E+00	0.000E+00
QSRW	-5.199E-02	-4.954E-02	-4.510E-01	-1.235E-01	-8.511E-02
	2.315E-01	2.146E-01	5.595E-01	3.977E-01	3.257E-01
QSCW	2.242E-02	2.012E-02	-3.213E-02	-4.668E-03	-8.316E-04
	-7.834E-02	1.420E-05	-5.175E-02	-2.364E-02	-5.720E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.701E+04	2.714E+04	3.097E+04	2.936E+04	2.854E+04
CO2	PPM	3.948E+04	3.952E+04	3.837E+04	3.879E+04	3.907E+04
CO	PPM	1.968E+04	1.971E+04	1.918E+04	1.937E+04	1.949E+04
OD	1/M	11.7	11.6	9.74	10.4	10.9
CT	GM/M3	5.774E+03	5.710E+03	4.476E+03	5.040E+03	5.309E+03



FIRE #2

GREASE FIRE IN KITCHEN

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)



## B. FUEL LOAD BACKGROUND FOR FIRE #2

### FIRE #2 - GREASE FIRE IN KITCHEN

BUILDING: Ranch

OCCUPANTS: Father aged 30, fully capable and awake, in bathroom off master bedroom.

Mother aged 30, fully capable and awake, in hall near washer/dryer.

Daughter aged 7, fully capable and awake, in living room watching TV.

Son aged 5, fully capable and awake, in living room watching TV.

Grandmother aged 71, fully capable and awake, in bedroom 3.

DOORS: The following doors are closed: bedroom 3; master bedroom; door to bathroom of master bedroom.

FIRE: Pot of burning vegetable oil 12 inches in diameter-exposes overhead cabinets and spills over exposing lower cabinets.

FUEL: Material Code: CKG001  
Material ID: Cooking oil, corn; cottonseed; etc.; in 12 in. pan.  
Kitchen cabinets are substituted by a modified wardrobe fuel load.  
Material Code: CLT001  
Material ID: Wardrobe closet, plywood, FR paint

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Kitchen

FLASHOVER  
TIME: 12 minutes

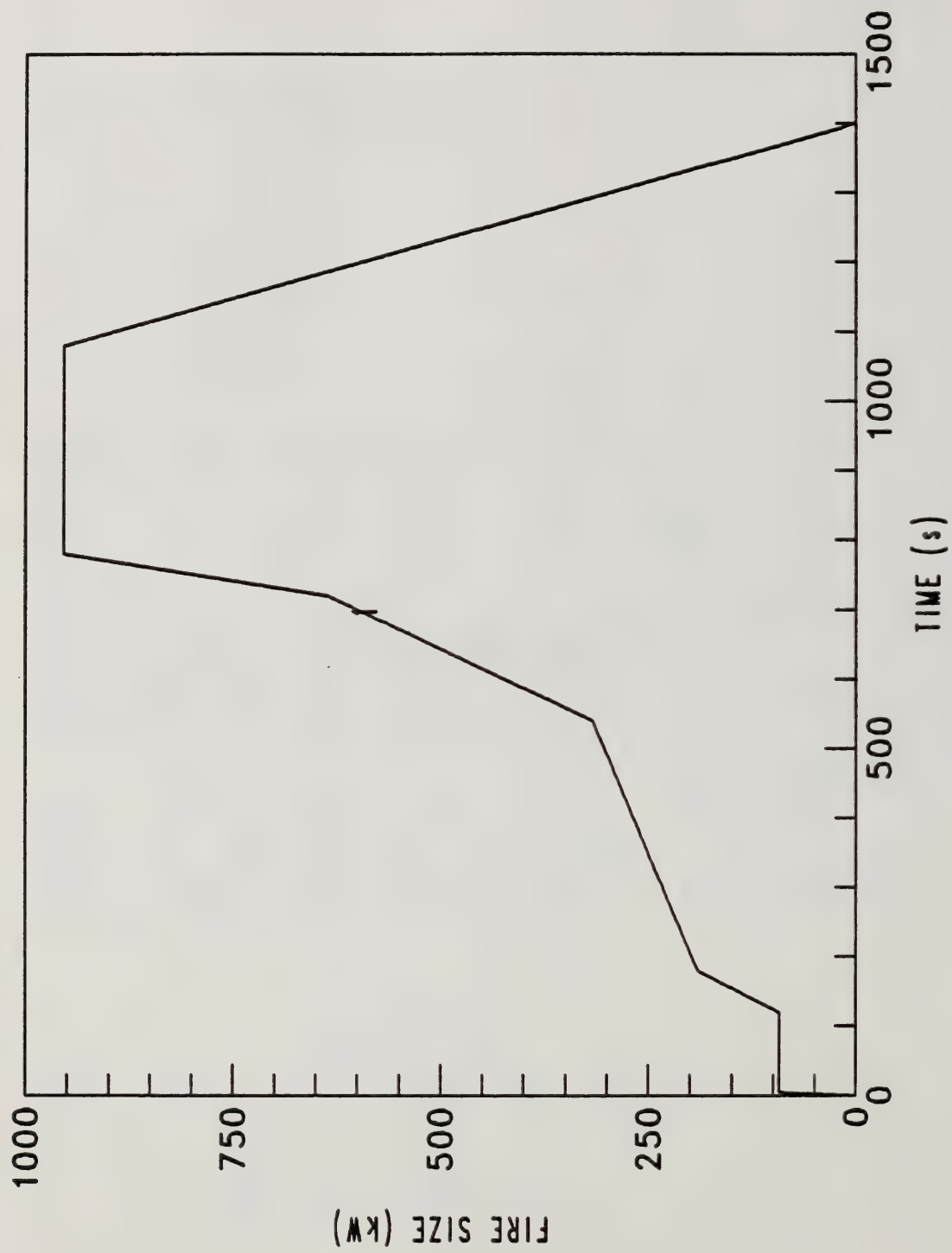
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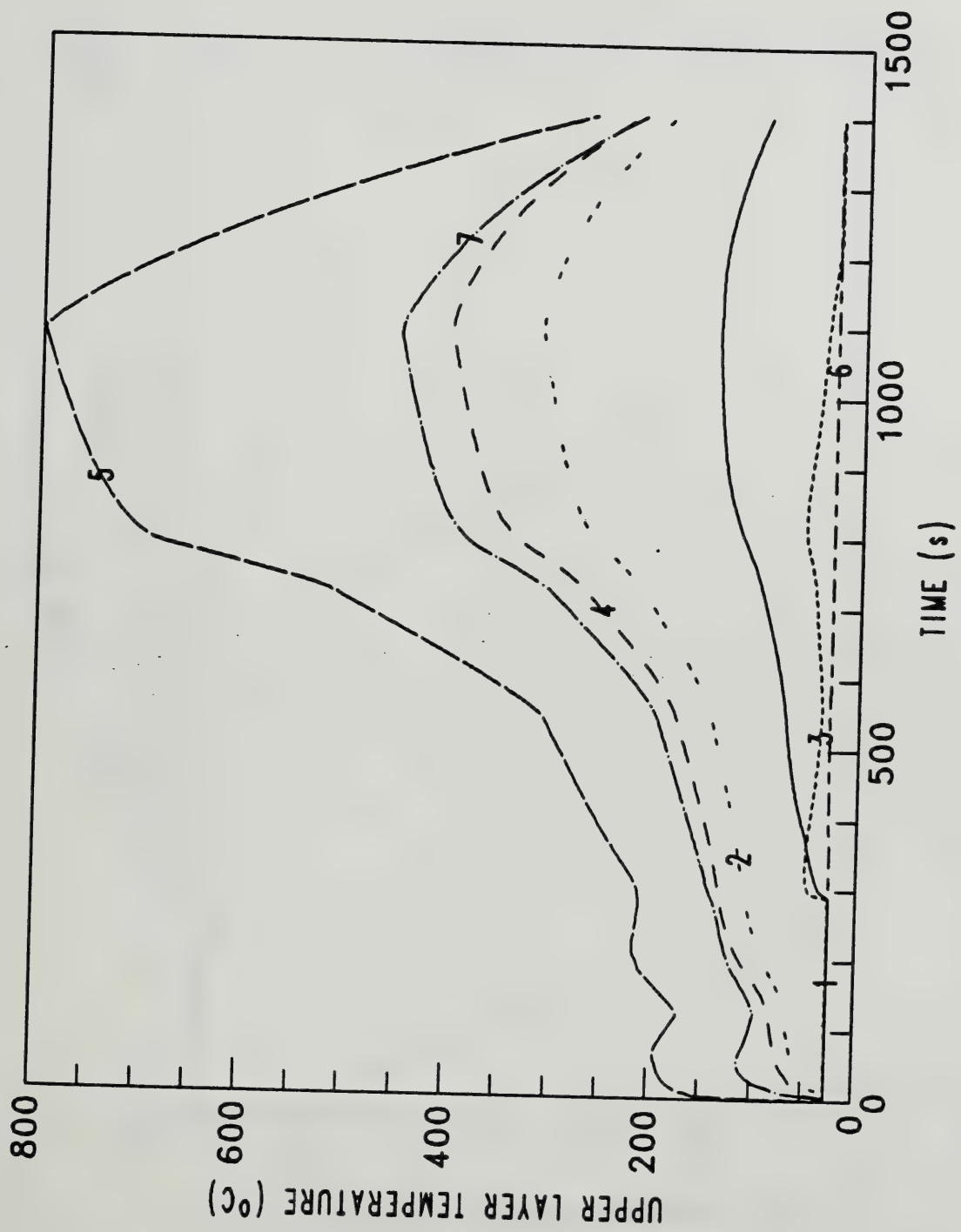
VERSN 017 RANCH SCENARIO 2 KITCHEN GREASE FIRE
TIMES 1400 100 0 0 0 0
NROOM 7
NMXOP 1
TAMB 300
HI/F 0.0 0.0 0.0 0.0 0.0 0.0 0.0
WIDTH 3.6 3.6 3.4 4.5 2.7 2.7 5.5
DEPTH 3.8 3.0 3.0 8.1 3.8 1.9 1.2
HEIGH 2.4 2.4 2.4 2.4 2.4 2.4 2.4
HVENT 1 7 1.1 .02 0.0
HVENT 2 7 1.1 2.1 0.0
HVENT 3 7 1.1 .02 0.0
HVENT 4 7 1.1 2.1 0.0
HVENT 1 8 1.1 0.2 0.0
HVENT 5 7 1.1 2.1 0.0
HVENT 1 6 1.1 .02 0.0
HVENT 4 5 1.1 2.1 0.0
CEILI
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9 .9 .9
DNSTY 790. 790. 790. 790. 790. 790. 790.
THICK .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9
WALLS
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790 790 790
THICK .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9
FLOOR
COND .0001 .0001 .0001 .0001 .0001 .0001 .0001
SPHT 1.4 1.4 1.4 1.4 1.4 1.4 1.4
DNSTY 300 300 300 300 300 300 300
THICK .0127 .0127 .0127 .0127 .0127 .0127 .0127
EMISS 1.0 1.0 1.0 1.0 1.0 1.0 1.0
LFBO 5
LFBT 1
LFPOS 1
CHEMI 1.0 0.0 0.0 0.0 0.0 15900 300
LFMAX 7
FMASS .00584 .00584 .0120 .0200 .040 .06 .06 .0
FAREA 1.0 1.0 1.5 2.0 3.0 3.0 3.0 .5
FHIGH 1. 1. 1. 1. 1. 1. 1. 1.
FTIME 120 60 360 180 60 300 320
CO .02 .02 .02 .02 .02 .02 .02 .02
O2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2
CO2 0.1 0.1 1.5 1.5 1.5 1.5 1.5 1.5
OD .06 .06 .02 .02 .01 .01 .01 .01
CT 1. 1. 1. 1. 1. 1. 1. 1.

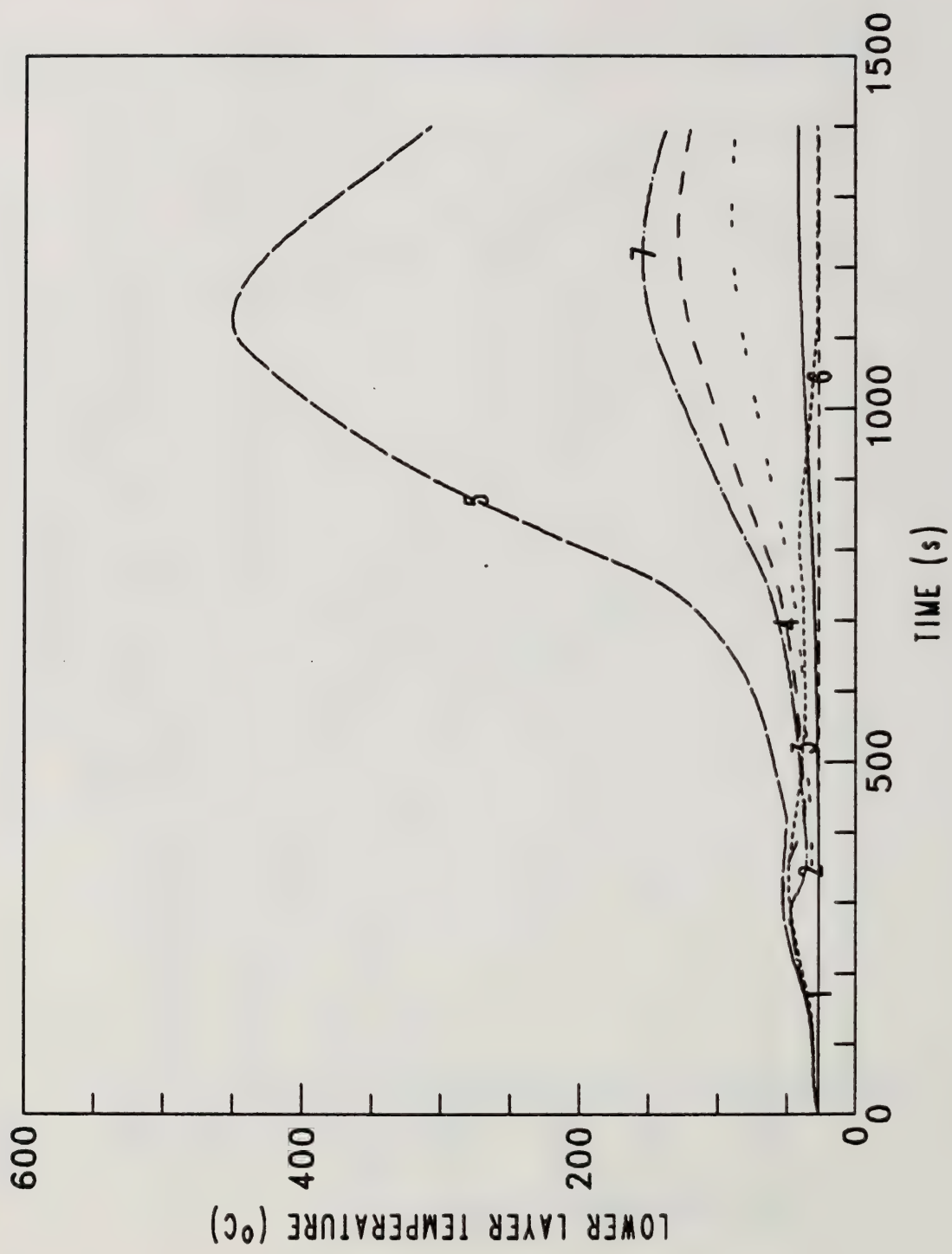
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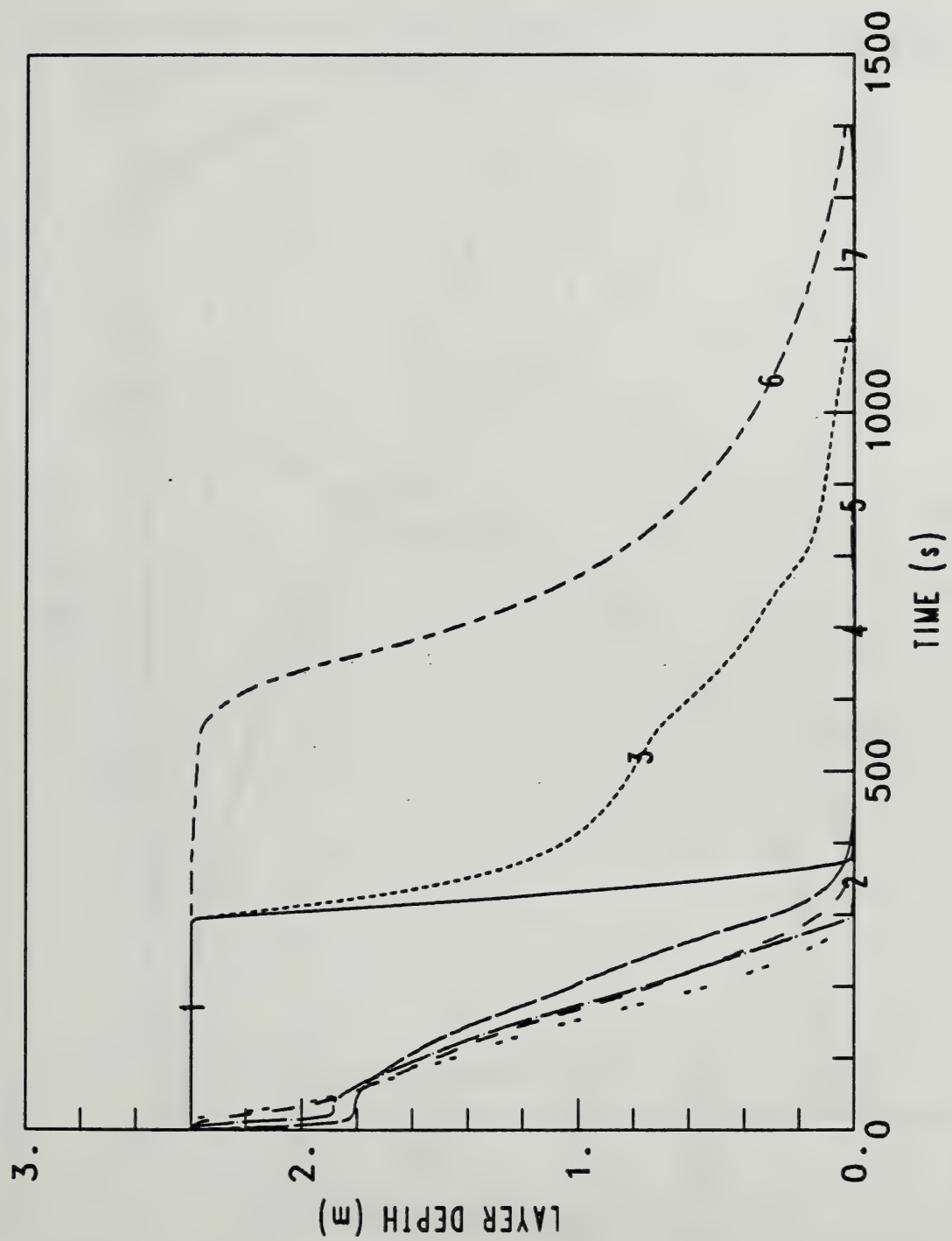
**D. GRAPHS FOR FIRE #2**

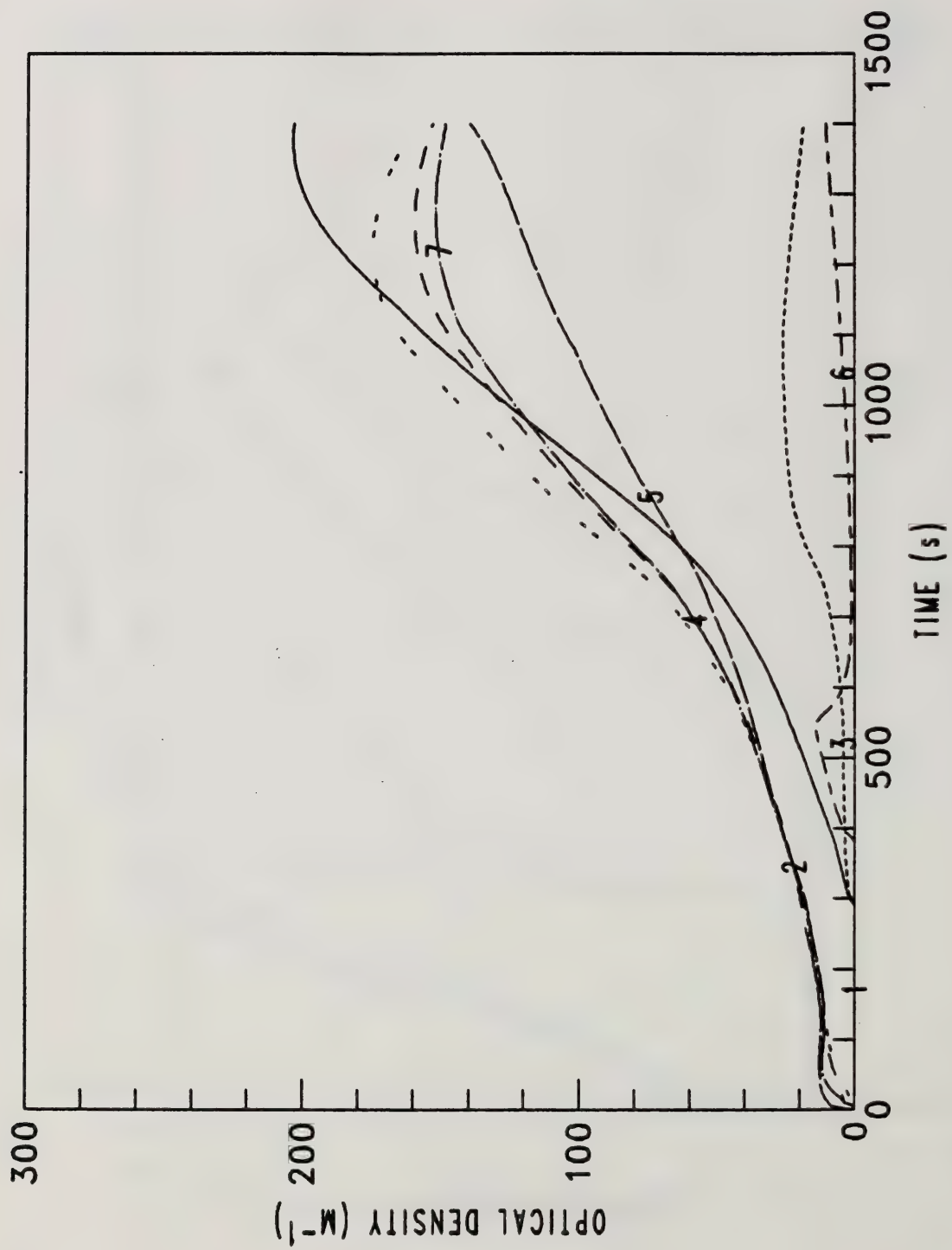


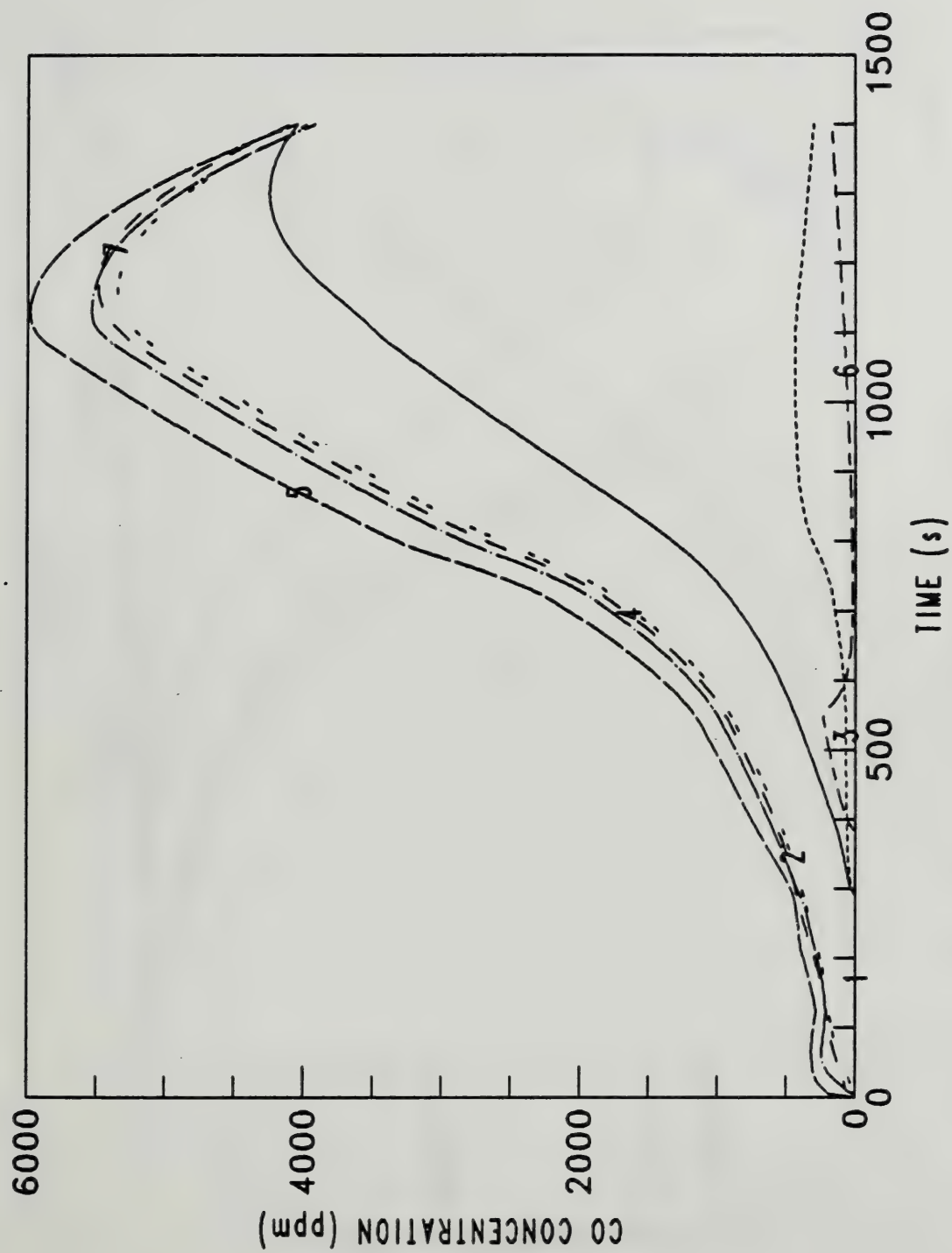


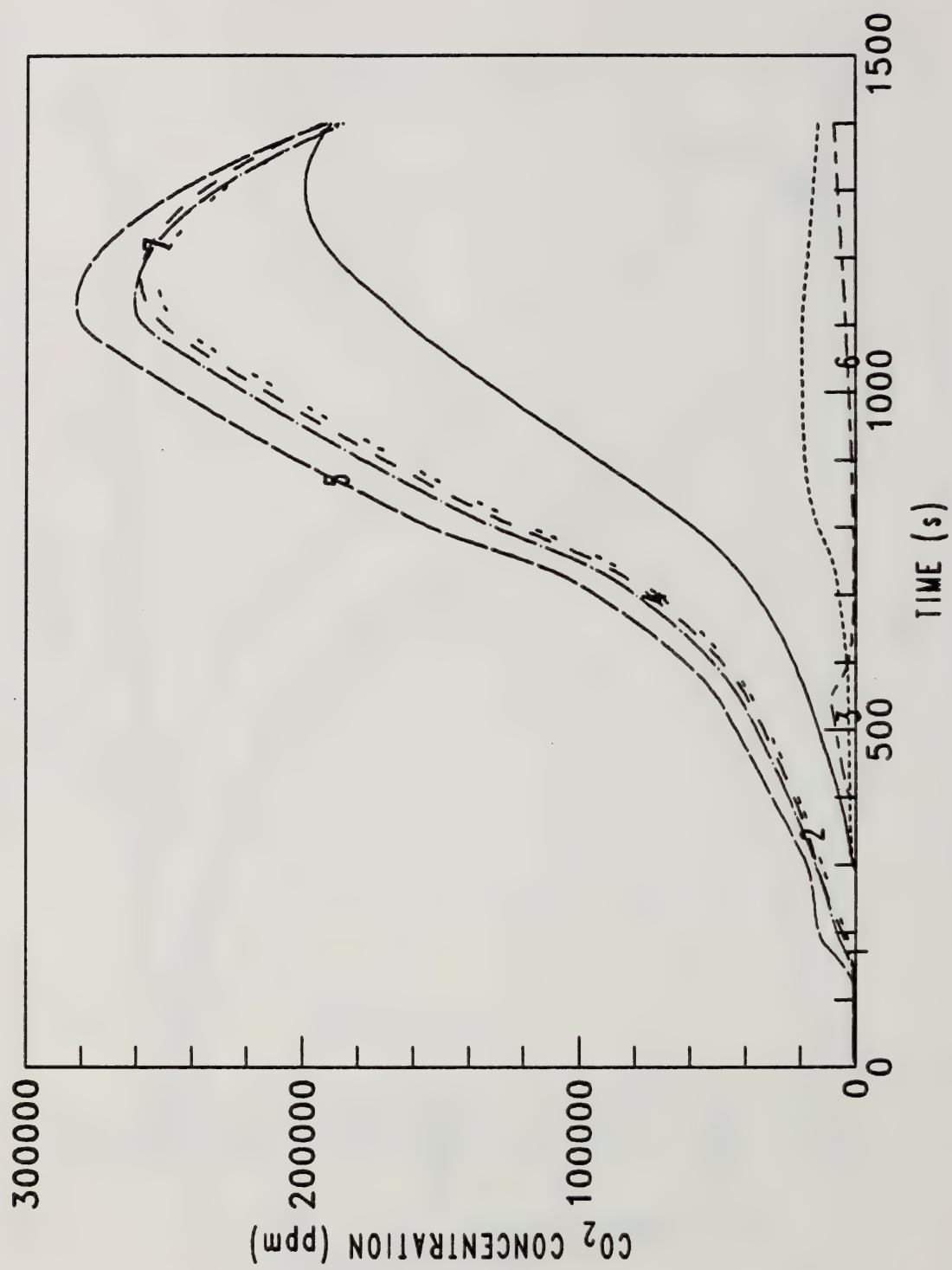




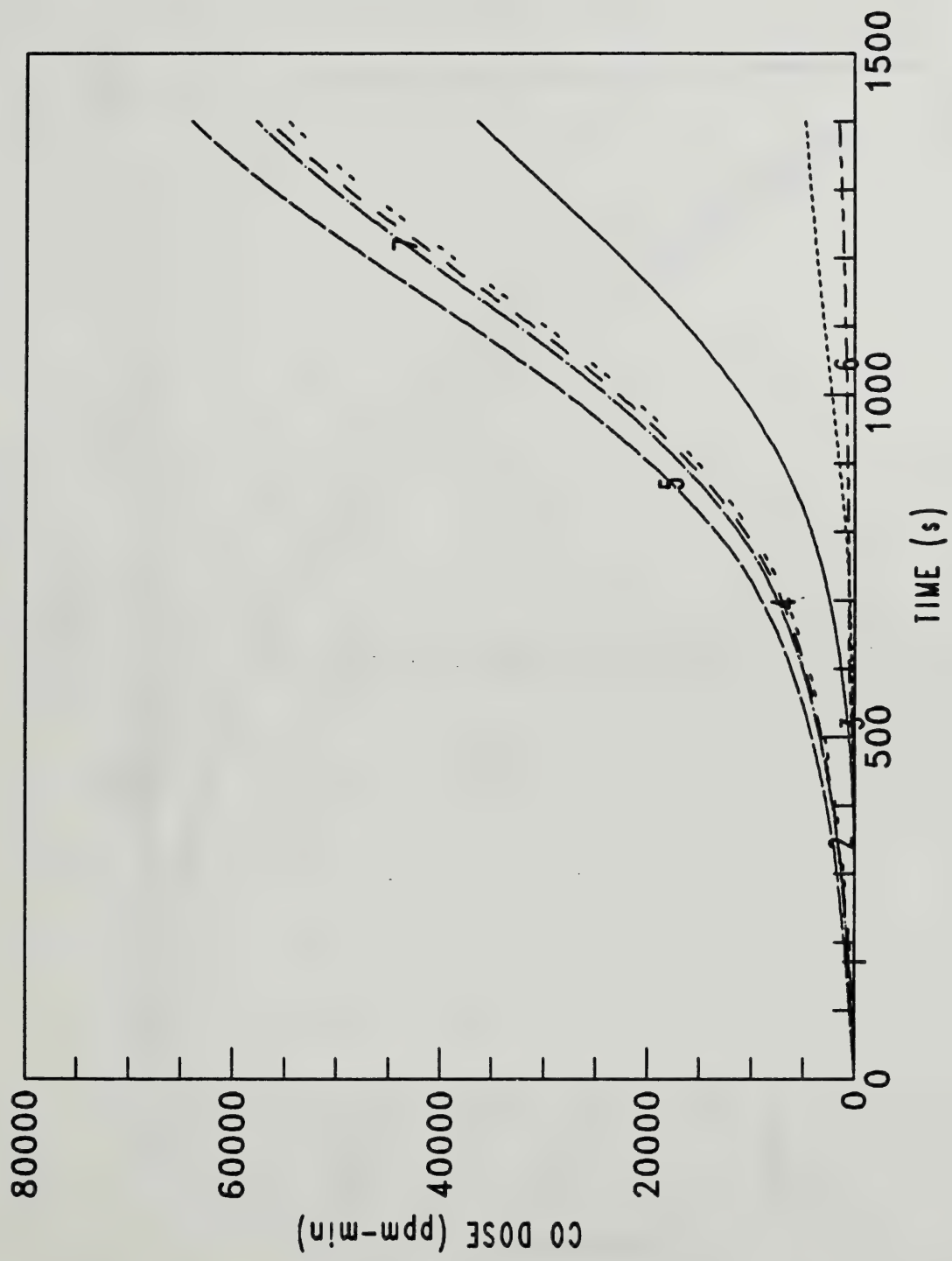


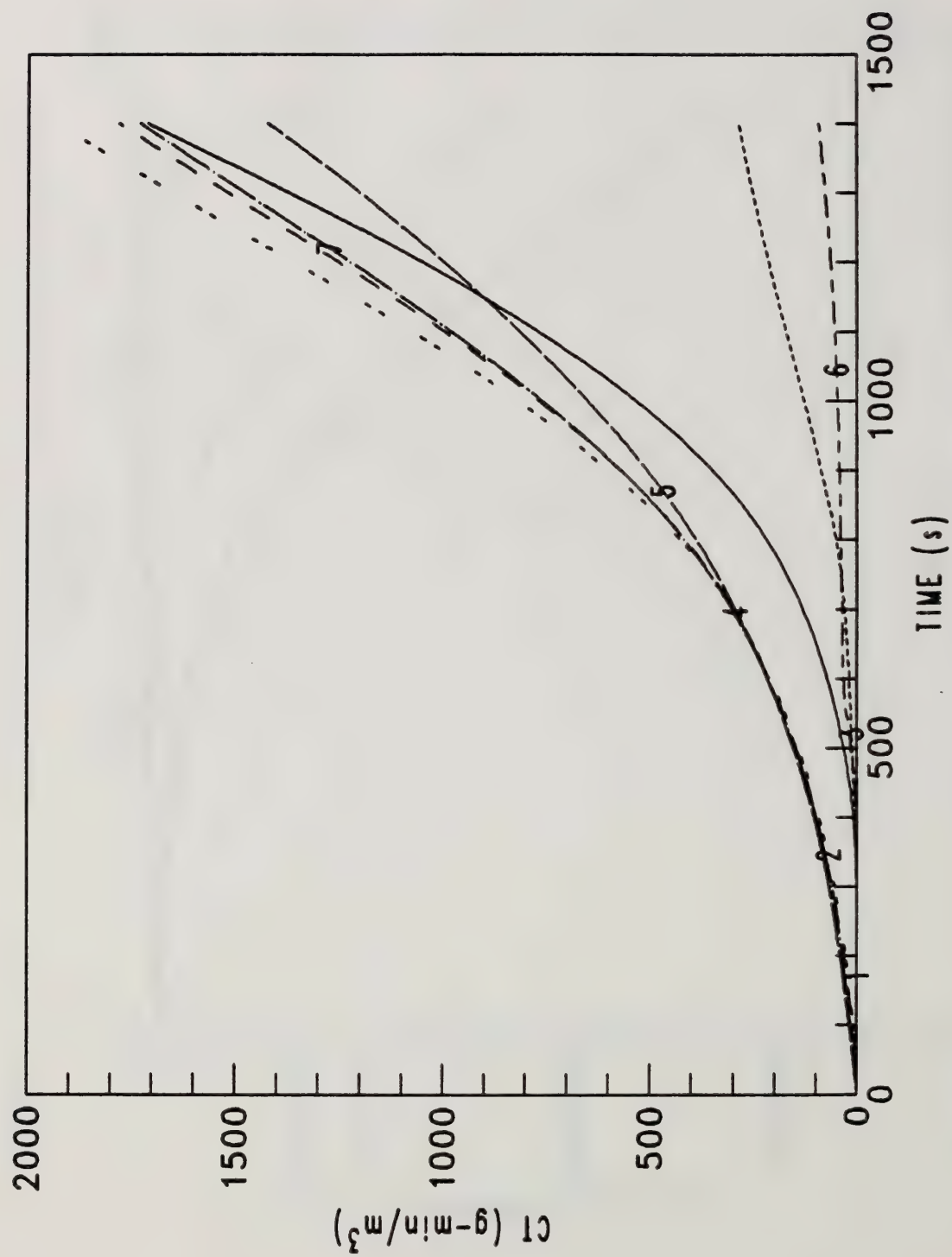












**E. COMPUTER OUTPUT FOR FIRE #2**

## RANCH SCENARIO 2 KITCHEN GREASE FIRE

TOTAL COMPARTMENTS = 7  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	3.6	3.4	4.5	2.7	2.7	5.5
DEPTH	3.8	3.0	3.0	8.1	3.8	1.9	1.2
HEIGHT	2.4	2.4	2.4	2.4	2.4	2.4	2.4
AREA	13.7	10.8	10.2	36.4	10.3	5.1	6.6
VOLUME	32.8	25.9	24.5	87.5	24.6	12.3	15.8
CEILING	2.4	2.4	2.4	2.4	2.4	2.4	2.4
FLOOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	1.10	1.10	1.10	1.10
	HH=	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.00	0.00	0.00	1.10	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	2.10	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	2.10	0.00	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 ( 1 )	BW=	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 ( 1 )	BW=	1.10	1.10	1.10	1.10	1.10	0.00	0.00	0.00	0.00
	HH=	0.02	2.10	0.02	2.10	2.10	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	2.10	0.02	2.10	2.10	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CEILING



COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
 SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
 DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
 THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
 EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

# FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
 SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
 DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
 THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
 EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

# UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
 SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
 DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
 THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
 EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

# LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
 SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
 DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
 THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
 EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 5  
 TIME STEP IS 1.00 SECONDS  
 PRINT EVERY 100 TIME STEPS  
 NUMBER OF FIRE INTERVALS = 7  
 TOTAL TIME INTERVAL = 1400  
 FIRE SOURCE = 1  
 FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
 AMBIENT AIR TEMPERATURE (K) = 300.  
 AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
 EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 15900.

FMASS= 5.84E-03 5.84E-03 1.20E-02 2.00E-02 4.00E-02 6.00E-02 6.00E-02 0.00E+00  
 FHIGH= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
 O2= -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2  
 CO2= 0.10 0.10 1.5 1.5 1.5 1.5 1.5 1.5  
 CO= 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
 OD= 6.00E-02 6.00E-02 2.00E-02 2.00E-02 1.00E-02 1.00E-02 1.00E-02 1.00E-02  
 CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
 FTIME= 1.20E+02 60. 3.60E+02 1.80E+02 60. 3.00E+02 3.20E+02

[illegible]

	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2	/					2.070E+05
CO2	/					0.000E+00
CO	/					0.000E+00
OD	/					0.000E+00
CT	/					0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	300.0	332.9	300.0	349.7	484.2	300.0	393.8
L. TEMP	300.0	300.0	300.0	300.1	300.6	300.0	300.1
UL. VOLUM	0.0	9.3	0.0	30.1	7.9	0.0	5.1
UL. THICK	0.0	0.9	0.0	0.8	0.8	0.0	0.8
GE. TEMP	300.0	304.6	300.0	308.1	341.7	300.0	319.0
UW. TEMP	300.0	303.1	300.0	305.5	329.2	300.0	313.0
LW. TEMP	300.0	300.3	300.0	300.7	303.5	300.0	300.9
FL. TEMP	300.0	300.5	300.0	301.2	305.7	300.0	301.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.053E-01	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.840E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.286E+01	0.000E+00	0.000E+00
QSRW	1.426E-07	9.081E-03	1.182E-07	7.747E-03	1.021E-01	3.748E-09	3.483E-02
	-3.988E-08	1.627E-02	-2.886E-08	3.746E-02	1.689E-01	-6.814E-10	4.606E-02
QSCW	8.747E-10	2.058E-01	8.727E-10	3.339E-01	1.426E+00	9.955E-12	6.825E-01
	2.987E-07	-8.433E-04	1.253E-07	-2.869E-03	-2.188E-02	3.370E-09	-3.897E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.948E+05	2.070E+05	1.933E+05	1.838E+05	2.070E+05	1.863E+05
CO2	PPM	0.000E+00	617.	0.000E+00	689.	1.171E+03	0.000E+00	1.040E+03
CO	PPM	0.000E+00	194.	0.000E+00	216.	368.	0.000E+00	327.
OD	1/M	0.000E+00	2.08	0.000E+00	2.21	2.72	0.000E+00	2.97
CT	GM/M3	0.000E+00	8.56	0.000E+00	11.5	19.2	0.000E+00	17.1

TIME = 200.0 SECONDS.

U. TEMP	300.0	351.0	300.0	379.8	524.6	300.0	402.7
L. TEMP	300.1	300.3	300.0	300.6	302.4	300.0	300.6
UL. VOLUM	0.0	19.2	0.0	57.1	13.5	0.0	10.2
UL. THICK	0.0	1.8	0.0	1.6	1.3	0.0	1.5
CE. TEMP	300.0	309.4	300.0	316.1	364.9	300.0	326.8
UW. TEMP	300.0	306.4	300.0	311.1	347.0	300.0	319.0
LW. TEMP	300.0	301.0	300.0	302.1	308.4	300.0	302.2
FL. TEMP	300.0	301.6	300.0	303.4	313.1	300.0	303.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.633E-01	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.244E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.979E+02	0.000E+00	0.000E+00
QSRW	4.983E-06	1.910E-02	1.108E-06	2.298E-02	1.651E-01	8.059E-09	4.669E-02
	-1.410E-06	4.839E-02	-2.735E-07	9.421E-02	3.369E-01	-1.417E-09	9.225E-02
QSCW	8.784E-08	3.340E-01	1.575E-08	5.625E-01	1.571E+00	3.458E-11	6.849E-01
	7.396E-06	-3.533E-03	1.708E-06	-9.353E-03	-5.821E-02	6.506E-09	-1.019E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.886E+05	2.070E+05	1.860E+05	1.763E+05	2.070E+05	1.852E+05
CO2 PPM	0.000E+00	3.736E+03	0.000E+00	5.508E+03	1.772E+04	0.000E+00	8.941E+03
CO PPM	0.000E+00	293.	0.000E+00	332.	486.	0.000E+00	345.
OD 1/M	0.000E+00	2.55	0.000E+00	2.50	1.66	0.000E+00	2.02
CT GM/M3	0.000E+00	29.1	0.000E+00	32.7	42.9	0.000E+00	40.7



TIME = 300.0 SECONDS.

U. TEMP	307.4	374.0	301.2	404.6	510.2	300.0	422.1
L. TEMP	301.1	305.7	300.2	306.2	310.9	300.0	307.3
UL. VOLUM	11.7	25.9	5.2	84.0	22.0	0.0	15.8
UL. THICK	0.9	2.4	0.5	2.3	2.1	0.0	2.4
CE. TEMP	300.2	317.3	300.0	327.1	375.8	300.0	336.2
UW. TEMP	300.1	312.1	300.0	319.1	356.2	300.0	326.3
LW. TEMP	300.0	303.3	300.0	305.4	316.5	300.0	306.7
FL. TEMP	300.0	305.6	300.0	308.9	325.3	300.0	311.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.467E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.467E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.332E+02	0.000E+00	0.000E+00
QSRW	3.815E-03	3.393E-02	6.448E-04	3.892E-02	1.445E-01	2.384E-08	7.520E-02
QSCW	2.224E-03	1.359E-01	2.746E-04	2.087E-01	5.857E-01	-4.228E-09	3.034E-01
	3.441E-02	4.861E-01	3.299E-03	7.022E-01	1.261E+00	1.392E-10	7.830E-01
	1.618E-04	1.404E-05	1.605E-05	-8.788E-03	-8.397E-02	3.095E-08	-1.356E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.049E+05	1.820E+05	2.067E+05	1.781E+05	1.711E+05	2.070E+05	1.771E+05
CO2 PPM	1.125E+03	1.244E+04	190.	1.472E+04	2.165E+04	0.000E+00	1.648E+04
CO PPM	32.6	405.	5.50	458.	568.	0.000E+00	475.
OD 1/M	0.202	2.28	3.467E-02	2.30	1.90	0.000E+00	2.12
CT GM/M3	0.236	56.0	4.243E-02	61.4	72.1	0.000E+00	68.5

TIME = 400.0 SECONDS.

U. TEMP	337.1	398.1	301.2	435.0	568.5	300.0	457.1
L. TEMP	316.1	325.7	300.2	329.7	340.3	300.0	320.8
UL. VOLUM	32.4	25.8	14.5	87.0	23.9	0.0	15.8
UL. THICK	2.4	2.4	1.4	2.4	2.3	0.0	2.4
CE. TEMP	305.2	326.4	300.1	339.0	396.7	300.0	350.0
UW. TEMP	303.5	318.9	300.1	328.1	373.0	300.0	336.8
LW. TEMP	301.7	307.3	300.0	311.1	331.7	300.0	313.5
FL. TEMP	301.6	310.9	300.0	317.3	350.7	300.0	322.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.689E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.689E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.685E+02	0.000E+00	0.000E+00
QSRW	1.770E-02	5.005E-02	4.704E-04	6.574E-02	3.148E-01	9.084E-08	1.220E-01
QSCW	4.607E-02	1.941E-01	5.650E-04	3.041E-01	9.391E-01	-1.734E-08	4.072E-01
	2.399E-01	6.391E-01	2.816E-03	8.934E-01	1.638E+00	4.498E-10	1.002E+00
	4.982E-03	5.009E-03	1.728E-05	3.917E-03	-5.050E-02	5.977E-08	-4.036E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.929E+05	1.689E+05	2.065E+05	1.656E+05	1.521E+05	2.070E+05	1.618E+05
CO2 PPM	8.354E+03	2.276E+04	285.	2.499E+04	3.553E+04	0.000E+00	2.819E+04
CO PPM	225.	610.	8.06	657.	872.	0.000E+00	721.
OD 1/M	1.17	2.68	4.976E-02	2.58	2.40	0.000E+00	2.61
CT GM/M3	11.2	92.6	0.777	98.4	110.	0.000E+00	107.

TIME = 500.0 SECONDS.

U. TEMP	349.3	417.8	300.8	460.4	612.8	300.0	484.4
L. TEMP	325.9	344.4	300.2	354.4	365.7	300.0	332.6
UL. VOLUM	32.3	25.8	14.5	87.0	23.9	0.0	15.8
UL. THICK	2.4	2.4	1.4	2.4	2.3	0.0	2.4
CE. TEMP	310.5	336.1	300.1	351.9	421.4	300.0	364.5
UW. TEMP	307.3	326.2	300.1	337.9	393.2	300.0	348.2
LW. TEMP	304.5	313.3	300.0	319.3	348.3	300.0	320.9
FL. TEMP	303.9	317.3	300.0	326.9	377.3	300.0	334.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.911E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.911E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.039E+02	0.000E+00	0.000E+00
QSRW	2.085E-02	6.390E-02	2.487E-04	8.823E-02	4.564E-01	1.119E-07	1.621E-01
	7.020E-02	2.518E-01	4.264E-04	3.920E-01	1.188E+00	-2.128E-08	5.138E-01
QSCW	3.050E-01	7.380E-01	1.536E-03	1.014E+00	1.798E+00	6.174E-10	1.121E+00
	8.458E-03	1.085E-02	1.442E-05	1.082E-02	-5.519E-02	5.351E-08	-4.689E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.805E+05	1.519E+05	2.065E+05	1.488E+05	1.335E+05	2.070E+05	1.441E+05
CO2 PPM	1.662E+04	3.579E+04	285.	3.811E+04	4.993E+04	0.000E+00	4.179E+04
CO PPM	421.	877.	8.06	925.	1.167E+03	0.000E+00	1.000E+03
OD 1/M	1.97	3.28	4.983E-02	3.10	2.77	0.000E+00	3.12
CT GM/M3	37.9	144.	1.54	148.	159.	0.000E+00	158.

TIME = 600.0 SECONDS.

U. TEMP	360.6	442.8	301.4	494.4	700.7	300.0	526.8
L. TEMP	325.9	329.0	300.2	338.5	415.0	300.0	346.3
UL. VOLUM	32.6	25.9	17.2	87.5	24.5	0.0	15.8
UL. THICK	2.4	2.4	1.7	2.4	2.4	0.0	2.4
CE. TEMP	315.1	346.5	300.1	366.1	456.1	300.0	381.7
UW. TEMP	310.7	334.2	300.1	349.0	421.8	300.0	361.8
LW. TEMP	306.9	317.3	300.0	326.1	373.8	300.0	330.1
FL. TEMP	306.4	324.4	300.0	338.2	418.0	300.0	349.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.667E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.667E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.240E+02	0.000E+00	0.000E+00
QSRW	2.479E-02	8.938E-02	5.740E-04	1.363E-01	9.232E-01	8.833E-07	2.529E-01
	9.645E-02	3.321E-01	7.012E-04	5.243E-01	1.907E+00	1.545E-07	6.987E-01
QSCW	3.689E-01	8.855E-01	3.289E-03	1.213E+00	2.292E+00	4.011E-07	1.372E+00
	7.216E-03	1.055E-03	1.380E-05	4.947E-05	-6.456E-03	5.012E-08	-8.216E-03

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.658E+05	1.315E+05	2.063E+05	1.275E+05	1.049E+05	2.070E+05	1.209E+05
CO2 PPM	2.714E+04	5.205E+04	482.	5.487E+04	7.201E+04	10.4	5.999E+04
CO PPM	656.	1.212E+03	12.4	1.271E+03	1.627E+03	0.251	1.377E+03
OD 1/M	2.78	3.94	6.811E-02	3.65	3.08	1.279E-03	3.63
CT GM/M3	80.4	212.	2.35	213.	218.	6.968E-04	224.



TIME = 700.0 SECONDS.

U. TEMP	380.6	486.9	303.7	554.8	841.8	300.0	597.2
L. TEMP	329.2	339.4	300.3	357.1	498.5	300.0	371.4
UL. VOLUM	32.7	25.9	21.3	87.5	24.6	0.0	15.8
UL. THICK	2.4	2.4	2.1	2.4	2.4	0.0	2.4
CE. TEMP	321.9	362.8	300.4	388.9	524.4	300.0	409.9
UW. TEMP	315.7	346.7	300.3	366.7	480.3	300.0	384.2
LW. TEMP	309.3	323.8	300.1	336.8	426.3	300.0	346.0
FL. TEMP	310.0	335.7	300.1	356.8	503.5	300.0	374.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.778E-02	0.000E+00	0.000E+00
PYROLITS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.778E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.007E+02	0.000E+00	0.000E+00
QSRW	3.525E-02	1.544E-01	1.580E-03	2.655E-01	2.186E+00	3.546E-06	4.717E-01
QSCW	1.439E-01	4.945E-01	2.727E-03	8.077E-01	3.270E+00	1.578E-06	1.088E+00
	5.025E-01	1.171E+00	1.222E-02	1.589E+00	2.872E+00	5.170E-06	1.781E+00
	7.057E-03	8.082E-04	9.563E-06	5.940E-05	-1.127E-02	4.438E-08	-7.571E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.435E+05	9.733E+04	2.049E+05	9.156E+04	5.799E+04	2.004E+05	8.179E+04
CO2 PPM	4.416E+04	8.003E+04	1.491E+03	8.424E+04	1.099E+05	4.486E+03	9.184E+04
CO PPM	1.023E+03	1.796E+03	34.9	1.884E+03	2.418E+03	106.	2.042E+03
OD 1/M	3.70	4.60	0.160	4.16	3.14	0.512	4.03
CT GM/M3	144.	303.	4.63	297.	292.	4.81	310.

THE FIRE BECAME VENTILATION CONTROLLED AT 774. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 800.0 SECONDS.

U. TEMP	408.4	545.8	309.3	637.8	1065.4	300.0	697.3
L. TEMP	342.8	362.0	300.5	392.2	650.5	300.0	409.9
UL. VOLUM	32.7	25.9	23.4	87.4	24.6	0.0	15.8
UL. THICK	2.4	2.4	2.3	2.4	2.4	0.0	2.4
CE. TEMP	331.2	385.3	301.1	421.8	668.6	300.0	452.4
UW. TEMP	322.6	364.2	300.8	392.9	612.0	300.0	419.0
LW. TEMP	313.4	334.8	300.2	356.1	534.8	300.0	373.8
FL. TEMP	315.1	353.4	300.4	387.8	676.6	300.0	418.3
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00	0.000E+00
QSRW	5.639E-02	2.834E-01	4.101E-03	5.560E-01	6.054E+00	-4.539E-05	9.733E-01
	2.134E-01	7.655E-01	8.973E-03	1.319E+00	6.207E+00	1.249E-05	1.828E+00
QSCW	6.944E-01	1.537E+00	4.137E-02	2.067E+00	3.284E+00	6.444E-06	2.303E+00
	1.121E-02	2.316E-03	8.612E-06	9.525E-04	-1.035E-01	1.524E-08	-3.166E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.089E+05	4.236E+04	2.009E+05	3.493E+04	0.000E+00	1.491E+05	2.437E+04
CO2 PPM	7.228E+04	1.296E+05	4.551E+03	1.364E+05	1.783E+05	4.149E+04	1.486E+05
CO PPM	1.619E+03	2.833E+03	102.	2.975E+03	3.846E+03	941.	3.228E+03
OD 1/M	4.65	5.26	0.378	4.62	3.20	3.95	4.42
CT GM/M3	237.	427.	10.3	410.	383.	49.7	422.

TIME = 900.0 SECONDS.

U. TEMP	418.9	571.9	305.7	671.9	1118.1	300.0	733.0
L. TEMP	393.9	428.9	300.5	484.2	701.3	300.0	435.4
UL. VOLUM	32.2	25.9	23.1	87.2	23.7	0.0	15.8
UL. THICK	2.4	2.4	2.3	2.4	2.3	0.0	2.4
CE. TEMP	340.1	406.7	301.3	453.1	783.8	300.0	490.6
UW. TEMP	329.5	381.5	300.9	418.9	722.6	300.0	451.8
LW. TEMP	323.6	354.5	300.3	386.1	609.2	300.0	402.4
FL. TEMP	321.6	374.8	300.5	423.7	788.8	300.0	461.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00	0.000E+00
QSRW	6.122E-02	3.387E-01	1.668E-03	6.894E-01	6.580E+00	-2.158E-05	1.161E+00
	2.299E-01	9.068E-01	6.403E-03	1.530E+00	6.109E+00	4.085E-06	2.115E+00
QSCW	6.991E-01	1.543E+00	1.810E-02	2.021E+00	2.480E+00	-4.180E-08	2.182E+00
	3.721E-02	2.358E-02	-4.820E-06	2.523E-02	-5.222E-01	3.821E-08	-1.459E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	7.739E+04	1.080E+04	2.008E+05	7.977E+03	0.000E+00	1.491E+05	5.952E+03
CO2	PPM	1.081E+05	1.876E+05	4.615E+03	1.946E+05	2.312E+05	4.150E+04	2.054E+05
CO	PPM	2.369E+03	4.039E+03	103.	4.183E+03	4.942E+03	941.	4.408E+03
OD	1/M	5.68	6.10	0.387	5.30	3.52	3.95	5.01
CT	GM/M3	373.	602.	19.8	565.	497.	139.	574.

TIME = 1000.0 SECONDS.

U. TEMP	420.9	587.8	303.8	692.9	1158.0	300.0	756.4
L. TEMP	409.2	443.4	300.6	510.9	755.5	300.0	464.4
UL. VOLUM	32.2	25.9	23.0	87.2	22.7	0.0	15.8
UL. THICK	2.4	2.4	2.3	2.4	2.2	0.0	2.4
CE. TEMP	346.0	423.5	301.1	477.6	862.6	300.0	520.6
UW. TEMP	334.2	395.4	300.8	440.0	799.5	300.0	478.2
LW. TEMP	331.3	369.8	300.3	410.2	666.2	300.0	427.2
FL. TEMP	326.2	393.6	300.6	453.6	864.6	300.0	496.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00	0.000E+00
QSRW	6.115E-02	3.734E-01	7.787E-04	7.834E-01	6.851E+00	-1.481E-05	1.289E+00
	2.205E-01	9.851E-01	4.478E-03	1.624E+00	6.012E+00	2.803E-06	2.253E+00
QSCW	6.504E-01	1.500E+00	9.143E-03	1.929E+00	2.034E+00	-2.540E-08	2.049E+00
	4.365E-02	2.059E-02	5.600E-07	2.253E-02	-6.661E-01	1.149E-07	-1.883E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	5.841E+04	2.656E+03	2.008E+05	1.820E+03	0.000E+00	1.491E+05	1.442E+03
CO2	PPM	1.437E+05	2.420E+05	4.614E+03	2.490E+05	2.871E+05	4.150E+04	2.604E+05
CO	PPM	3.110E+03	5.168E+03	103.	5.313E+03	6.106E+03	941.	5.550E+03
OD	1/M	6.65	6.90	0.389	5.96	3.93	3.95	5.63
CT	GM/M3	559.	827.	29.4	763.	634.	228.	764.



TIME = 1100.0 SECONDS.

U. TEMP	420.2	601.3	302.7	710.9	1190.2	300.0	772.4
L. TEMP	422.7	483.9	300.6	542.4	789.2	300.0	479.6
UL. VOLUM	32.0	25.9	22.9	87.0	19.4	0.0	15.8
UL. THICK	2.3	2.4	2.2	2.4	1.9	0.0	2.4
CE. TEMP	350.6	439.0	301.0	500.7	928.2	300.0	548.0
UW. TEMP	338.1	408.4	300.7	459.9	862.0	300.0	502.4
LW. TEMP	337.9	384.2	300.3	431.0	712.5	300.0	450.3
FL. TEMP	329.9	411.4	300.6	481.0	919.1	300.0	528.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.625E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.625E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.944E+02	0.000E+00	0.000E+00
QSRW	5.845E-02	4.033E-01	3.613E-04	8.657E-01	6.452E+00	-1.195E-05	1.354E+00
QSCW	2.009E-01	1.040E+00	3.291E-03	1.684E+00	5.688E+00	2.260E-06	2.310E+00
	5.884E-01	1.448E+00	5.033E-03	1.829E+00	1.684E+00	-1.911E-08	1.881E+00
	4.971E-02	3.216E-02	2.807E-06	2.367E-02	-8.166E-01	2.978E-07	-3.137E-01
UPPER LAYER SPECIES CONCENTRATION							
O2	4.716E+04	642.	2.008E+05	414.	0.000E+00	1.491E+05	349.
CO2	1.798E+05	2.993E+05	4.614E+03	3.066E+05	3.430E+05	4.150E+04	3.173E+05
CO	3.860E+03	6.361E+03	103.	6.511E+03	7.270E+03	941.	6.734E+03
OD	7.63	7.80	0.391	6.71	4.35	3.95	6.33
CT	794.	1.102E+03	39.1	1.002E+03	796.	317.	991.

TIME = 1200.0 SECONDS.

U. TEMP	390.7	584.0	302.1	681.4	1108.8	300.0	728.4
L. TEMP	426.6	507.2	300.8	607.1	778.7	300.0	491.1
UL. VOLUM	30.7	25.9	22.9	86.6	14.3	0.0	15.8
UL. THICK	2.2	2.4	2.2	2.4	1.4	0.0	2.4
CE. TEMP	349.4	447.1	301.0	510.7	920.9	300.0	555.0
UW. TEMP	337.6	415.5	300.7	468.8	851.7	300.0	508.7
LW. TEMP	342.1	402.6	300.3	450.8	717.5	300.0	460.2
FL. TEMP	330.1	423.3	300.6	494.1	899.4	300.0	535.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.724E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.750E-02	0.000E+00	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.962E+02	0.000E+00	0.000E+00
QSRW	2.817E-02	3.175E-01	1.291E-04	6.398E-01	3.117E+00	-1.051E-05	9.146E-01
	1.013E-01	9.013E-01	2.541E-03	1.347E+00	3.717E+00	1.988E-06	1.837E+00
QSCW	3.046E-01	1.169E+00	2.898E-03	1.413E+00	1.117E+00	-1.613E-08	1.372E+00
	5.210E-02	3.787E-02	1.893E-05	4.981E-02	-7.552E-01	3.968E-07	-2.726E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	4.855E+04	210.	2.008E+05	122.	0.000E+00	1.491E+05	163.
CO2	PPM	1.925E+05	3.432E+05	4.614E+03	3.472E+05	3.623E+05	4.150E+04	3.512E+05
CO	PPM	4.120E+03	7.274E+03	103.	7.357E+03	7.667E+03	941.	7.438E+03
OD	1/M	8.47	8.85	0.392	7.64	4.80	3.95	7.19
CT	GM/M3	1.076E+03	1.431E+03	48.8	1.286E+03	982.	406.	1.263E+03

TIME = 1300.0 SECONDS.

U. TEMP	362.4	557.1	301.7	638.1	919.4	300.0	667.3
L. TEMP	336.3	492.6	300.9	570.4	716.8	300.0	440.5
UL. VOLUM	29.2	25.9	22.8	86.7	14.3	0.0	15.5
UL. THICK	2.1	2.4	2.2	2.4	1.4	0.0	2.3
CE. TEMP	344.9	448.9	300.9	509.9	845.6	300.0	548.8
UW. TEMP	334.4	417.1	300.7	468.2	774.7	300.0	503.0
LW. TEMP	336.8	406.1	300.3	455.8	684.2	300.0	460.2
FL. TEMP	327.6	427.1	300.6	494.4	823.0	300.0	522.8
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.514E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.875E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.981E+02	0.000E+00	0.000E+00
QSRW	-2.270E-03	2.116E-01	-1.318E-05	3.835E-01	1.590E-01	-9.599E-06	4.524E-01
QSCW	6.982E-02	7.445E-01	2.059E-03	1.023E+00	1.810E+00	1.816E-06	1.390E+00
	1.004E-01	8.748E-01	1.715E-03	9.980E-01	3.564E-01	-1.429E-08	8.652E-01
	2.399E-03	2.755E-02	2.760E-05	3.033E-02	-6.785E-01	1.193E-06	-6.713E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	5.052E+04	873.	2.008E+05	125.	0.000E+00	1.491E+05	2.354E+03
CO2 PPM	1.931E+05	3.549E+05	4.614E+03	3.570E+05	3.524E+05	4.150E+04	3.522E+05
CO PPM	4.130E+03	7.511E+03	103.	7.556E+03	7.453E+03	941.	7.453E+03
OD 1/M	9.09	9.41	0.392	8.25	5.60	3.95	7.76
CT GM/M3	1.388E+03	1.799E+03	58.5	1.608E+03	1.197E+03	495.	1.567E+03

TIME = 1400.0 SECONDS.

U. TEMP	347.9	501.1	301.4	557.0	672.1	300.0	556.6
L. TEMP	311.9	488.0	301.0	469.9	570.8	300.0	374.9
UL. VOLUM	28.1	25.7	22.8	84.8	11.5	0.0	14.9
UL. THICK	2.1	2.4	2.2	2.3	1.1	0.0	2.3
CE. TEMP	341.0	441.9	300.9	496.2	758.1	300.0	524.7
UW. TEMP	331.2	411.4	300.6	456.2	674.5	300.0	480.9
LW. TEMP	330.8	406.1	300.4	445.7	646.8	300.0	449.4
FL. TEMP	323.7	422.8	300.6	480.4	718.9	300.0	481.8
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.741E-02	5.788E-02	-1.073E-04	5.428E-02	-1.944E+00	-8.894E-06	-8.336E-02
	6.673E-02	4.808E-01	1.739E-03	5.910E-01	1.009E+00	1.682E-06	1.051E+00
QSCW	2.952E-02	4.148E-01	1.021E-03	3.970E-01	-3.081E-02	-1.294E-08	1.650E-01
	-6.553E-02	2.754E-02	3.892E-05	-4.321E-02	-1.215E+00	1.075E-06	-1.048E+00

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	5.052E+04	1.169E+04	2.008E+05	5.654E+03	2.492E+04	1.491E+05	2.338E+04
CO2	PPM	1.931E+05	3.265E+05	4.613E+03	3.368E+05	2.984E+05	4.150E+04	3.035E+05
CO	PPM	4.130E+03	6.908E+03	103.	7.126E+03	6.312E+03	941.	6.422E+03
OD	1/M	9.47	9.56	0.392	8.87	6.50	3.95	7.99
CT	GM/M3	1.719E+03	2.188E+03	68.2	1.957E+03	1.438E+03	584.	1.889E+03



INPUT FAST FILE : SYS:RASC2D.DMP/G  
INPUT EXITT FILE : SCENTWOM.EVA  
TENABS OUTPUT FILE: SCENTWOM.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	6	0
	1	19
	7	21
	4	25
	8	27

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	7	0
	1	14
	6	15
	1	16
	7	18
	4	22
	8	25

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	3	0
	7	17
	4	23
	8	25

OCCUPANT 4	ROOM NUMBER	ENTER TIME (S)
	4	0
	8	24

OCCUPANT 5	ROOM NUMBER	ENTER TIME (S)
	4	0
	8	24

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
0.	OUT	ESCAPE		27.0	0.0	0.00	0.
23.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 2							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
0.	OUT	ESCAPE		27.0	0.0	0.00	0.
23.	OUT	FINAL TIME		27.0	0.0	0.00	0.

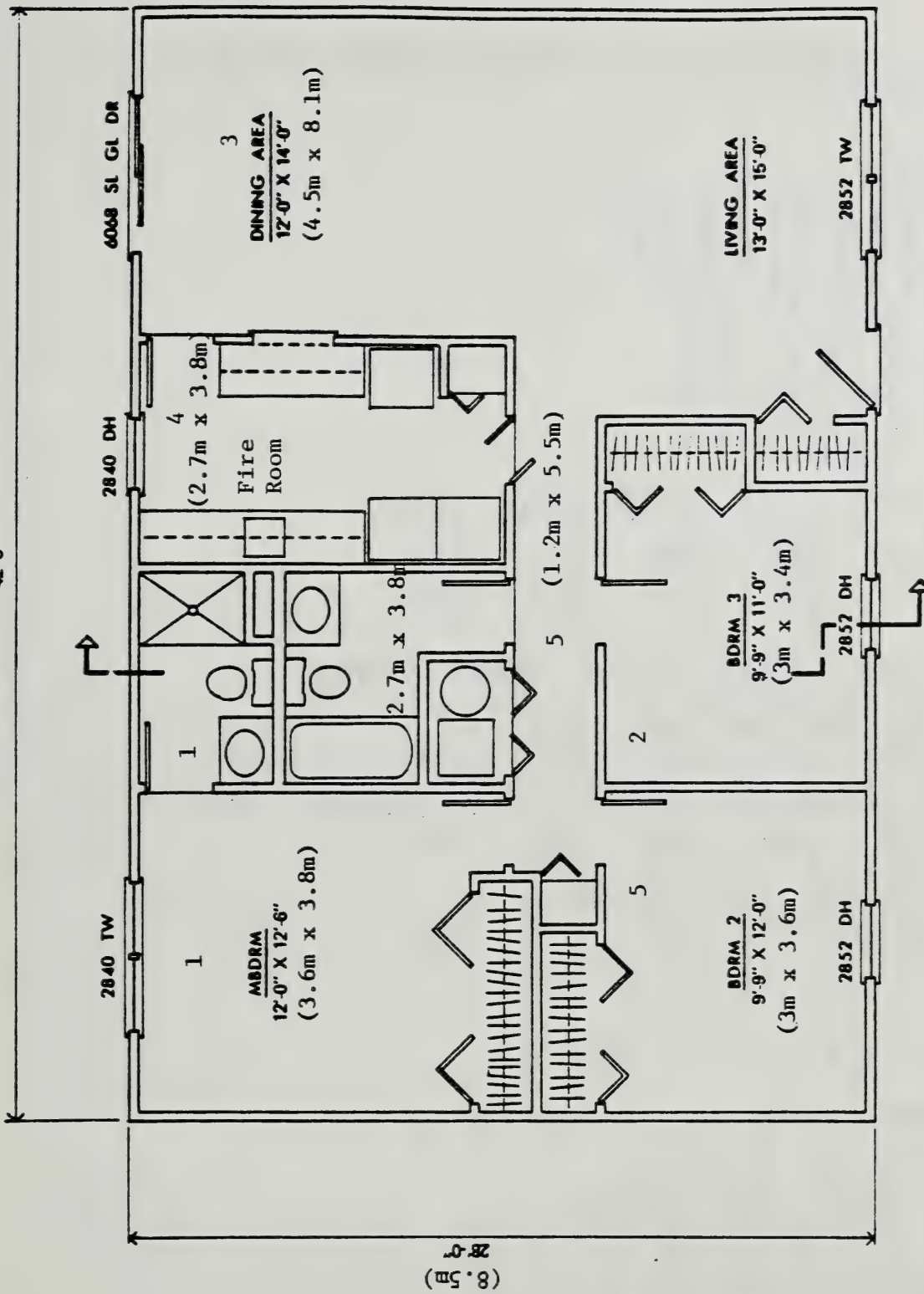
PERSON 3							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
0.	OUT	ESCAPE		27.0	0.0	0.00	0.
23.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 4							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
0.	OUT	ESCAPE		27.0	0.0	0.00	0.
23.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 5							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
0.	OUT	ESCAPE		27.0	0.0	0.00	0.
23.	OUT	FINAL TIME		27.0	0.0	0.00	0.

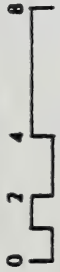
(12.8m)

42'-0"



# FLOOR PLAN OF A TYPICAL RANCH HOUSE

AUG. 10, 1977



NBS

G - Floor Plan for FIRE #2  
(5 Rooms)

VERSN 017 RANCH SCENARIO 2 KITCHEN GREASE FIRE-5R  
 TIMES 1400 100 0 0 0 .1  
 NROOM 5  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 0.0 0.0 0.0 0.0  
 WIDTH 3.6 3.0 4.5 2.7 3.0  
 DEPTH 6.6 3.4 8.1 3.8 5.8  
 HEIGH 2.4 2.4 2.4 2.4 2.4  
 HVENT 1 5 .01 2.1 0.0  
 HVENT 2 5 .01 2.1 0.0  
 HVENT 3 5 1.1 2.1 0.0  
 HVENT 4 5 1.1 2.1 0.0  
 HVENT 1 6 1.1 0.2 0.0  
 HVENT 3 4 1.1 2.1 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790. 790. 790. 790. 790.  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0  
 LFBO 4  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 15900 300  
 LFMAX 7  
 FMASS .00584 .00584 .012 .02 .04 .06 .06 0.0  
 FAREA 1.0 1.0 1.5 2.0 3.0 3.0 3.0 .5  
 FHIGH 1. 1. 1. 1. 1. 1. 1. 1.  
 FTIME 120 60 360 180 60 300 320  
 CO .02 .02 .02 .02 .02 .02 .02 .02  
 CO2 0.1 0.1 1.5 1.5 1.5 1.5 1.5 1.5  
 OD .06 .06 .02 .02 .01 .01 .01 .01  
 CT 1. 1. 1. 1. 1. 1. 1. 1.  
 O2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2



I. OUTPUT - COMPUTER FILE (5 Compartments) FOR FIRE #2

## RANCH SCENARIO 2 KITCHEN GREASE FIRE-SR

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	3.0	4.5	2.7	3.0
DEPTH	6.6	3.4	8.1	3.8	5.8
HEIGHT	2.4	2.4	2.4	2.4	2.4
AREA	23.8	10.2	36.4	10.3	17.4
VOLUME	57.0	24.5	87.5	24.6	41.8
CEILING	2.4	2.4	2.4	2.4	2.4
FLOOR	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

	1 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.01	1.10
HH=		0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.20
HL=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=		0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.20
HLP=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
HH=		0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
HL=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=		0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
HLP=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	1.10	1.10	0.00	1.10	0.00
HH=		0.00	0.00	0.00	2.10	2.10	0.00	2.10	0.00
HL=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=		0.00	0.00	0.00	2.10	2.10	0.00	2.10	0.00
HLP=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	1.10	0.00	1.10	0.00	1.10	0.00
HH=		0.00	0.00	2.10	0.00	2.10	0.00	2.10	0.00
HL=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=		0.00	0.00	2.10	0.00	2.10	0.00	2.10	0.00
HLP=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.01	0.01	1.10	1.10	1.10	0.00	0.00	0.00
HH=		2.10	2.10	2.10	2.10	2.10	0.00	0.00	0.00
HL=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=		2.10	2.10	2.10	2.10	2.10	0.00	0.00	0.00
HLP=		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
FLOOR					
COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02

THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 4  
TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 7  
TOTAL TIME INTERVAL = 1400  
FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 15900.

FMASS= 5.84E-03 5.84E-03 1.20E-02 2.00E-02 4.00E-02 6.00E-02 6.00E-02 0.00E+00  
FHIGH= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
O2= -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2 -1.2  
CO2= 0.10 0.10 1.5 1.5 1.5 1.5 1.5 1.5  
CO= 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
OD= 6.00E-02 6.00E-02 2.00E-02 2.00E-02 1.00E-02 1.00E-02 1.00E-02 1.00E-02  
CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
FTIME= 1.20E+02 60. 3.60E+02 1.80E+02 60. 3.00E+02 3.20E+02

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00



TIME = 100.0 SECONDS.

U. TEMP	321.5	303.0	345.9	479.4	376.4
L. TEMP	300.0	300.0	300.1	300.6	300.1
UL. VOLUM	12.8	1.9	25.6	7.2	11.8
UL. THICK	0.5	0.2	0.7	0.7	0.7
CE. TEMP	302.3	300.3	307.4	340.7	313.3
UW. TEMP	301.5	300.2	305.0	328.5	309.0
LW. TEMP	300.2	300.0	300.6	303.4	300.9
FL. TEMP	300.3	300.0	301.1	305.5	301.6
PLUME	0.000E+00	0.000E+00	0.000E+00	3.368E-01	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	5.840E-03	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	9.286E+01	0.000E+00
QSRW	5.088E-03	4.051E-04	5.526E-03	8.868E-02	1.688E-02
	1.008E-02	8.994E-04	3.277E-02	1.579E-01	4.998E-02
QSCW	1.251E-01	9.463E-03	3.028E-01	1.383E+00	5.591E-01
	-4.210E-04	-2.698E-05	-2.477E-03	-2.074E-02	-4.120E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.985E+05	2.049E+05	1.944E+05	1.852E+05	1.894E+05
CO2	PPM	431.	105.	637.	1.096E+03	886.
CO	PPM	135.	32.9	200.	345.	278.
OD	1/M	1.51	0.388	2.07	2.57	2.64
CT	GM/M3	5.74	1.86	10.9	18.8	14.2

TIME = 200.0 SECONDS.

U. TEMP	332.9	335.7	373.4	561.1	411.8
L. TEMP	300.1	300.0	300.4	302.1	300.6
UL. VOLUM	28.1	10.6	41.9	10.0	17.8
UL. THICK	1.2	1.0	1.2	1.0	1.0
CE. TEMP	305.6	305.3	314.2	370.9	325.8
UW. TEMP	303.8	303.5	309.7	351.2	317.9
LW. TEMP	300.6	300.3	301.6	308.5	302.5
FL. TEMP	300.9	300.6	302.6	313.3	304.1
PLUME	0.000E+00	0.000E+00	0.000E+00	4.048E-01	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.244E-02	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	1.979E+02	0.000E+00
QSRW	6.528E-03	1.052E-02	1.569E-02	2.302E-01	2.969E-02
	2.447E-02	1.950E-02	7.090E-02	3.554E-01	1.061E-01
QSCW	1.956E-01	2.241E-01	5.158E-01	1.909E+00	7.998E-01
	-1.781E-03	-1.114E-03	-7.210E-03	-6.178E-02	-1.298E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.919E+05	1.918E+05	1.877E+05	1.755E+05	1.834E+05
CO2	PPM	2.203E+03	2.682E+03	5.441E+03	2.154E+04	1.037E+04
CO	PPM	237.	235.	305.	498.	383.
OD	1/M	2.32	2.20	2.28	1.27	2.14
CT	GM/M3	22.3	13.0	30.5	41.3	37.8

TIME = 300.0 SECONDS.

U. TEMP	336.8	333.3	406.7	575.1	432.9
L. TEMP	301.0	300.3	301.9	305.9	302.5
UL. VOLUM	43.2	16.2	59.2	13.9	26.9
UL. THICK	1.8	1.6	1.6	1.4	1.5
CE. TEMP	308.5	307.7	326.0	391.9	337.4
UW. TEMP	305.9	305.3	318.2	368.1	326.6
LW. TEMP	301.2	300.8	304.0	315.8	305.3
FL. TEMP	302.0	301.4	306.4	323.7	308.4
PLUME	0.000E+00	0.000E+00	0.000E+00	1.219E-01	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.467E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	2.332E+02	0.000E+00
QSRW	6.654E-03	6.709E-03	2.983E-02	2.385E-01	4.568E-02
	4.239E-02	2.958E-02	1.517E-01	5.249E-01	1.877E-01
QSCW	2.042E-01	1.794E-01	7.393E-01	1.776E+00	8.907E-01
	-2.438E-03	-2.772E-03	-1.823E-02	-1.137E-01	-2.650E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.876E+05	1.876E+05	1.785E+05	1.671E+05	1.753E+05
CO2 PPM	6.952E+03	7.358E+03	1.617E+04	2.718E+04	2.015E+04
CO PPM	308.	308.	452.	631.	502.
OD 1/M	2.32	2.28	2.03	1.58	1.86
CT GM/M3	45.6	36.4	57.9	69.1	67.4

TIME = 400.0 SECONDS.

U. TEMP	339.1	330.9	432.8	593.0	457.3
L. TEMP	304.9	300.9	306.3	313.7	306.9
UL. VOLUM	54.5	19.8	71.0	17.0	32.6
UL. THICK	2.3	1.9	1.9	1.7	1.9
CE. TEMP	310.4	308.6	338.0	410.9	349.8
UW. TEMP	307.3	306.1	327.2	383.7	336.1
LW. TEMP	302.2	301.3	307.7	325.5	309.6
FL. TEMP	303.6	302.2	312.3	337.8	315.0
PLUME	0.000E+00	0.000E+00	0.000E+00	1.689E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.689E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	2.685E+02	0.000E+00
QSRW	8.435E-03	5.329E-03	4.547E-02	2.719E-01	6.950E-02
	6.190E-02	3.723E-02	2.498E-01	7.403E-01	2.984E-01
QSCW	2.070E-01	1.493E-01	8.809E-01	1.718E+00	1.006E+00
	2.029E-04	-3.396E-03	-2.635E-02	-1.662E-01	-4.008E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.833E+05	1.839E+05	1.670E+05	1.566E+05	1.640E+05
CO2 PPM	1.120E+04	1.089E+04	2.639E+04	3.539E+04	2.933E+04
CO PPM	376.	366.	633.	798.	681.
OD 1/M	2.39	2.38	2.22	1.85	2.15
CT GM/M3	74.2	65.2	94.5	104.	105.



TIME = 500.0 SECONDS.

U. TEMP	349.9	327.4	452.2	605.8	477.1
L. TEMP	310.9	302.0	316.7	325.7	316.3
UL. VOLUM	56.5	22.1	80.6	20.0	37.2
UL. THICK	2.4	2.2	2.2	1.9	2.1
CE. TEMP	313.7	309.1	349.2	426.2	361.7
UW. TEMP	309.8	306.5	335.8	396.6	345.5
LW. TEMP	303.7	301.8	312.8	337.7	315.5
FL. TEMP	305.7	303.0	320.7	355.3	324.6
PLUME	0.000E+00	0.000E+00	0.000E+00	1.911E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.911E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	3.039E+02	0.000E+00
QSRW	1.336E-02	3.692E-03	6.285E-02	3.117E-01	9.525E-02
	8.370E-02	4.089E-02	3.537E-01	9.961E-01	4.314E-01
QSCW	2.764E-01	1.159E-01	9.559E-01	1.658E+00	1.074E+00
	1.293E-03	-2.440E-03	-1.504E-02	-2.128E-01	-3.992E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.766E+05	1.810E+05	1.571E+05	1.485E+05	1.548E+05
CO2 PPM	1.735E+04	1.357E+04	3.488E+04	4.200E+04	3.697E+04
CO PPM	482.	413.	790.	925.	827.
OD 1/M	2.51	2.50	2.42	2.01	2.34
CT GM/M3	109.	98.9	140.	145.	151.

TIME = 600.0 SECONDS.

U. TEMP	364.6	327.7	485.2	679.2	515.7
L. TEMP	312.7	305.0	343.7	358.4	334.6
UL. VOLUM	56.8	24.3	86.9	23.1	41.1
UL. THICK	2.4	2.4	2.4	2.2	2.4
CE. TEMP	318.3	309.6	362.3	452.1	376.5
UW. TEMP	313.1	306.9	345.9	417.9	357.1
LW. TEMP	305.4	302.4	320.5	359.7	324.5
FL. TEMP	308.2	304.0	332.6	389.3	339.5
PLUME	0.000E+00	0.000E+00	0.000E+00	2.667E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	2.667E-02	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	4.240E+02	0.000E+00
QSRW	2.031E-02	4.894E-03	1.149E-01	6.920E-01	1.769E-01
	1.131E-01	4.897E-02	5.017E-01	1.757E+00	6.600E-01
QSCW	3.753E-01	1.142E-01	1.159E+00	2.114E+00	1.316E+00
	1.051E-03	1.377E-04	3.318E-03	-2.068E-01	-1.815E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.675E+05	1.777E+05	1.445E+05	1.288E+05	1.411E+05
CO2	PPM	2.532E+04	1.645E+04	4.498E+04	5.711E+04	4.766E+04
CO	PPM	626.	465.	989.	1.238E+03	1.043E+03
OD	1/M	2.71	2.62	2.64	2.21	2.58
CT	GM/M3	153.	137.	194.	192.	204.

TIME = 700.0 SECONDS.

U. TEMP	376.7	329.7	551.4	834.8	592.5
L. TEMP	314.6	305.1	362.1	460.4	365.7
UL. VOLUM	56.8	24.5	87.4	24.3	41.7
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	324.1	310.6	385.8	519.8	404.8
UE. TEMP	317.4	307.7	364.1	475.3	379.4
LW. TEMP	307.5	303.0	333.9	415.0	341.8
FL. TEMP	311.5	305.0	352.2	484.5	366.9
PLUME	0.000E+00	0.000E+00	0.000E+00	3.778E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	3.778E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	6.007E+02	0.000E+00
QSRW	2.344E-02	5.658E-03	2.555E-01	2.029E+00	3.988E-01
QSCW	1.437E-01	5.147E-02	8.021E-01	3.412E+00	1.073E+00
	4.352E-01	1.214E-01	1.593E+00	2.861E+00	1.796E+00
	6.358E-04	5.271E-06	2.787E-03	-1.206E-01	-1.999E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.543E+05	1.756E+05	1.117E+05	7.942E+04	1.027E+05
CO2 PPM	3.605E+04	2.042E+04	6.992E+04	9.437E+04	7.667E+04
CO PPM	835.	543.	1.508E+03	2.020E+03	1.651E+03
OD 1/M	3.07	2.82	3.05	2.41	3.01
CT GM/M3	208.	180.	260.	252.	271.

THE FIRE BECAME VENTILATION CONTROLLED AT 793. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 800.0 SECONDS.

U. TEMP	399.4	331.5	635.9	1061.0	691.4
L. TEMP	320.5	317.6	399.1	582.0	391.0
UL. VOLUM	56.7	24.4	87.4	24.3	41.6
UL. THICK	2.4	2.4	2.4	2.4	2.4
CE. TEMP	331.4	311.7	419.3	664.2	446.5
UW. TEMP	322.8	308.5	390.7	606.8	413.2
LW. TEMP	310.1	303.8	353.8	527.8	368.5
FL. TEMP	315.7	306.0	383.9	663.5	409.6
PLUME	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00
QSRW	3.852E-02	6.156E-03	5.467E-01	5.839E+00	8.594E-01
	1.965E-01	5.329E-02	1.319E+00	6.452E+00	1.790E+00
QSCW	5.929E-01	1.279E-01	2.081E+00	3.293E+00	2.319E+00
	1.138E-03	3.700E-03	4.628E-03	-5.331E-01	-9.928E-02

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.290E+05	1.712E+05	4.968E+04	0.000E+00	3.413E+04
CO2 PPM	5.590E+04	2.579E+04	1.175E+05	1.593E+05	1.296E+05
CO PPM	1.240E+03	652.	2.505E+03	3.378E+03	2.758E+03
OD 1/M	3.58	3.06	3.53	2.57	3.45
CT GM/M3	283.	231.	354.	331.	366.



TIME = 900.0 SECONDS.

U. TEMP	389.0	336.8	668.5	1113.8	724.1
L. TEMP	319.3	307.7	425.0	742.9	451.4
UL. VOLUM	56.9	24.5	87.5	24.0	41.7
UL. THICK	2.4	2.4	2.4	2.3	2.4
CE. TEMP	335.2	313.6	450.3	780.9	483.0
UW. TEMP	325.9	309.9	416.5	718.7	444.4
LW. TEMP	312.3	304.9	377.0	606.0	398.1
FL. TEMP	319.3	307.1	419.5	788.8	455.2
PLUME	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00
QSRW	2.001E-02	8.072E-03	6.690E-01	6.556E+00	1.033E+00
	1.848E-01	6.207E-02	1.534E+00	5.913E+00	1.994E+00
QSCW	4.381E-01	1.563E-01	2.021E+00	2.474E+00	2.187E+00
	-6.813E-06	6.632E-05	1.178E-03	-2.128E-01	-1.013E-02

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.081E+05	1.622E+05	1.120E+04	0.000E+00	7.561E+03
CO2 PPM	7.523E+04	3.581E+04	1.780E+05	2.195E+05	1.907E+05
CO PPM	1.640E+03	859.	3.770E+03	4.638E+03	4.036E+03
OD 1/M	4.30	3.41	4.39	3.07	4.25
CT GM/M3	387.	295.	489.	435.	501.

TIME = 1000.0 SECONDS.

U.TEMP	385.9	337.6	689.3	1150.5	746.6
L.TEMP	322.0	309.3	455.0	809.0	488.5
UL.VOLUM	57.0	24.5	87.4	23.4	41.7
UL.THICK	2.4	2.4	2.4	2.3	2.4
CE.TEMP	336.8	314.9	474.8	859.1	512.2
UW.TEMP	327.3	310.9	437.5	795.1	470.0
LW.TEMP	313.8	305.4	397.3	661.9	423.0
FL.TEMP	321.6	308.2	449.5	865.2	491.7
PLUME	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	6.000E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	9.540E+02	0.000E+00
QSRW	1.574E-02	7.255E-03	7.591E-01	6.778E+00	1.164E+00
QSCW	1.761E-01	6.432E-02	1.626E+00	5.754E+00	2.064E+00
	3.890E-01	1.510E-01	1.927E+00	2.005E+00	2.053E+00
	4.181E-05	1.632E-04	1.124E-03	-2.629E-01	-7.229E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	9.321E+04	1.534E+05	2.757E+03	0.000E+00	4.351E+03
CO2	PPM	9.700E+04	4.696E+04	2.386E+05	2.775E+05	2.494E+05
CO	PPM	2.093E+03	1.089E+03	5.036E+03	5.850E+03	5.265E+03
OD	1/M	5.02	3.82	5.28	3.55	5.04
CT	GM/M3	523.	377.	674.	566.	681.

TIME = 1100.0 SECONDS.

U.TEMP	385.6	339.1	705.3	1166.1	761.8
L.TEMP	323.7	326.8	484.3	830.0	487.4
UL.VOLUM	56.9	24.4	87.5	22.7	41.6
UL.THICK	2.4	2.4	2.4	2.2	2.4
CE.TEMP	339.0	316.2	496.9	920.8	538.3
UW.TEMP	329.1	311.9	456.6	854.4	493.1
LW.TEMP	315.4	306.4	416.5	708.0	444.4
FL.TEMP	323.9	309.2	476.2	922.6	521.3
PLUME	0.000E+00	0.000E+00	0.000E+00	5.625E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	5.625E-02	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	8.944E+02	0.000E+00
QSRW	1.299E-02	7.239E-03	8.298E-01	6.228E+00	1.227E+00
	1.748E-01	6.649E-02	1.675E+00	5.365E+00	2.104E+00
QSCW	3.629E-01	1.530E-01	1.819E+00	1.561E+00	1.889E+00
	-2.273E-04	6.286E-03	1.754E-03	-5.077E-01	-1.933E-01

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	8.090E+04	1.448E+05	1.005E+03	0.000E+00	4.200E+03
CO2 PPM	1.220E+05	6.055E+04	2.949E+05	3.293E+05	3.027E+05
CO PPM	2.614E+03	1.370E+03	6.214E+03	6.936E+03	6.380E+03
OD 1/M	5.80	4.29	6.08	4.02	5.75
CT GM/M3	696.	480.	903.	723.	901.

TIME = 1200.0 SECONDS.

U. TEMP	369.2	347.1	685.4	1067.5	729.7
L. TEMP	320.2	336.0	515.5	759.3	491.6
UL. VOLUM	56.6	24.4	87.3	19.1	41.3
UL. THICK	2.4	2.4	2.4	1.9	2.4
CE. TEMP	338.5	318.5	509.1	899.9	548.9
UW. TEMP	328.9	313.6	467.3	831.7	502.5
LW. TEMP	316.0	309.1	430.9	704.1	455.6
FL. TEMP	324.4	310.8	491.5	887.5	531.5
PLUME	0.000E+00	0.000E+00	0.000E+00	3.750E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	3.750E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	5.962E+02	0.000E+00
QSRW	-3.292E-03	1.129E-02	6.652E-01	2.976E+00	8.871E-01
	1.440E-01	7.842E-02	1.425E+00	3.503E+00	1.747E+00
QSCW	2.128E-01	2.026E-01	1.471E+00	9.850E-01	1.452E+00
	-1.658E-02	9.974E-03	6.923E-03	-8.314E-01	-2.399E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	/	7.544E+04	1.334E+05	916.	0.000E+00	6.602E+03
CO2 PPM	/	1.363E+05	8.336E+04	3.334E+05	3.544E+05	3.314E+05
CO PPM	/	2.912E+03	1.842E+03	7.021E+03	7.461E+03	6.981E+03
OD 1/M	/	6.52	4.99	6.91	4.66	6.45
CT GM/M3	/	906.	612.	1.174E+03	906.	1.156E+03

TIME = 1300.0 SECONDS.

U. TEMP	358.5	351.4	629.2	928.4	654.6
L. TEMP	312.8	312.4	492.8	660.8	440.1
UL. VOLUM	55.3	24.5	87.4	14.2	39.9
UL. THICK	2.3	2.4	2.4	1.4	2.3
CE. TEMP	336.8	321.0	506.4	840.3	538.5
UW. TEMP	327.6	315.4	465.2	768.8	493.2
LW. TEMP	315.9	309.8	434.4	681.1	453.3
FL. TEMP	322.9	312.3	490.2	812.1	511.9
PLUME	0.000E+00	0.000E+00	0.000E+00	8.207E-02	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	1.875E-02	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	2.981E+02	0.000E+00
QSRW	-1.284E-02	1.163E-02	3.427E-01	1.895E-01	3.121E-01
	1.244E-01	8.985E-02	9.976E-01	2.174E+00	1.320E+00
QSCW	1.359E-01	2.174E-01	9.500E-01	4.507E-01	8.541E-01
	-5.263E-02	6.818E-06	3.346E-04	-1.133E+00	-5.609E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	7.240E+04	1.200E+05	1.445E+03	0.000E+00	1.242E+04
CO2	PPM	/	1.452E+05	1.100E+05	3.431E+05	3.259E+05	3.199E+05
CO	PPM	/	3.098E+03	2.395E+03	7.226E+03	6.862E+03	6.742E+03
OD	1/M	/	7.00	5.84	7.68	4.91	6.94
CT	GM/M3	/	1.141E+03	784.	1.484E+03	1.114E+03	1.440E+03



TIME = 1400.0 SECONDS.

U. TEMP	351.6	348.5	552.8	675.2	556.9
L. TEMP	308.1	315.4	455.0	555.9	388.3
UL. VOLUM	53.4	24.4	86.0	11.7	38.3
UL. THICK	2.2	2.4	2.4	1.1	2.2
CE. TEMP	335.6	322.3	492.7	752.7	516.7
UW. TEMP	326.6	316.4	453.2	669.3	473.2
LW. TEMP	315.8	310.1	427.6	643.0	444.6
FL. TEMP	321.3	313.4	475.6	711.2	480.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.946E-02	7.692E-03	4.261E-02	-1.896E+00	-1.347E-01
QSCW	1.123E-01	8.648E-02	6.173E-01	1.094E+00	9.386E-01
	9.201E-02	1.799E-01	3.937E-01	-2.672E-02	2.257E-01
	-7.662E-02	3.472E-04	-1.067E-01	-1.315E+00	-8.510E-01

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	6.995E+04	1.089E+05	8.900E+03	3.949E+04	2.766E+04
CO2 PPM	1.520E+05	1.309E+05	3.167E+05	2.582E+05	2.732E+05
CO PPM	3.240E+03	2.826E+03	6.669E+03	5.439E+03	5.764E+03
OD 1/M	7.36	6.59	8.06	5.40	7.03
CT GM/M3	1.395E+03	997.	1.817E+03	1.333E+03	1.733E+03

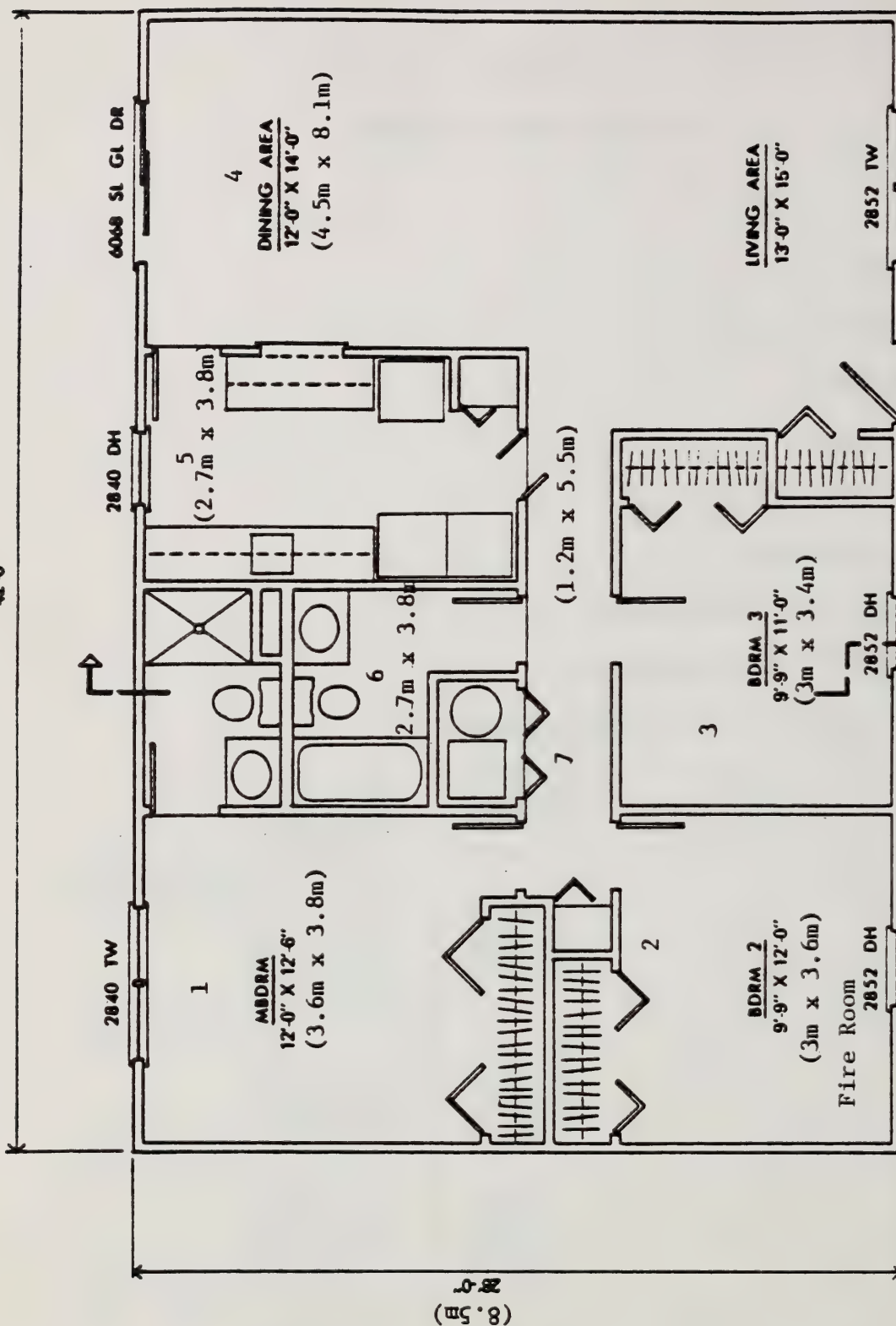
FIRE #3

MATTRESS AND BED LINENS

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)

(12.8m)

42'-0"



# FLOOR PLAN OF A TYPICAL RANCH HOUSE

AUG. 10, 1977

NBS

## B. FUEL LOAD BACKGROUND FOR FIRE #3

### FIRE #3 - MATTRESS FIRE

BUILDING: Ranch

OCCUPANTS: Father aged 30, fully capable and awake, in master bedroom.

Mother aged 30, fully capable and awake, in master bedroom.

Daughter aged 7, fully capable and awake, in bathtub. (Assumed she will not respond but computer will determine - can have background noise such as radio or running water to slow response to smoke detector.)

Son aged 5, fully capable and awake, in living room watching TV.

Grandmother aged 71, fully capable and awake, in living room watching TV.

DOORS: The following doors are closed: bathroom; bedroom 2; master bedroom.

FIRE: Electric heater too close to combustible bed linens.

FUEL: Material Code: BED002  
Material ID: Double Bed, Bedding, Night Table  
Mass was reduced due to limited availability of oxygen. Fire Room (Bedroom) window and door are closed.

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Bedroom #2

FLASHOVER

TIME: No flashover

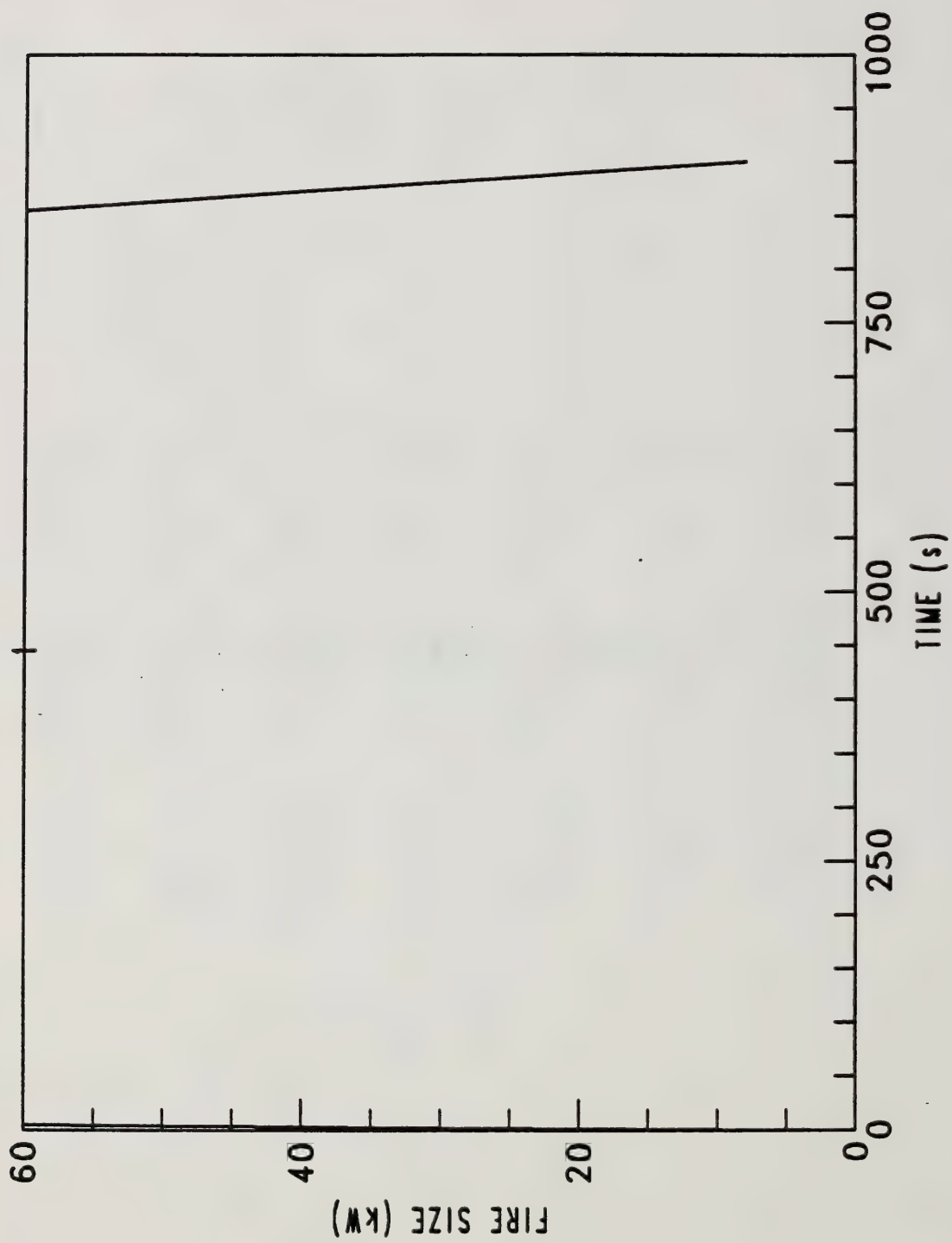
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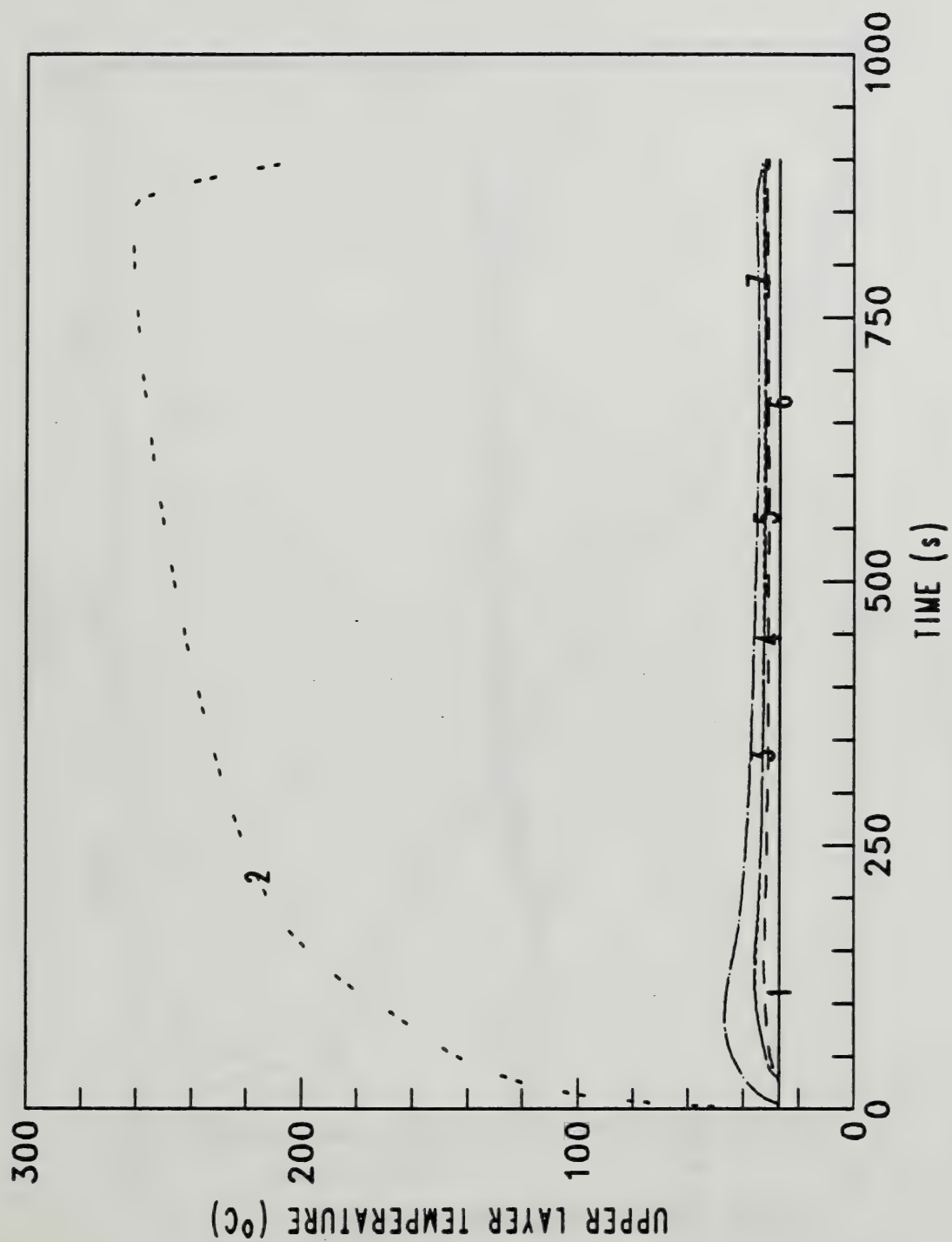
VERSN 017 RANCH SCENARIO 3 FLAMING MATTRESS IN BR
TIMES 900 100 0 0 0 0
NROOM 7
NMXOP 1
TAMB 300
HI/F 0.0 0.0 0.0 0.0 0.0 0.0 0.0
WIDTH 3.6 3.6 3.4 4.5 2.7 2.7 5.5
DEPTH 3.8 3.0 3.0 8.1 3.8 3.8 1.2
HEIGH 2.4 2.4 2.4 2.4 2.4 2.4 2.4
HVENT 1 7 1.1 .02 0.0
HVENT 2 7 .01 2.1 0.0
HVENT 3 7 1.1 2.1 0.0
HVENT 4 7 1.1 2.1 0.0
HVENT 1 8 1.1 0.2 0.0
HVENT 5 7 1.1 2.1 0.0
HVENT 1 6 1.1 .02 0.0
HVENT 4 5 1.1 2.1 0.0
CEILI
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9 .9 .9
DNSTY 790. 790. 790. 790. 790. 790. 790.
THICK .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9
WALLS
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT 0.9 0.9 0.9 0.9 0.9 0.9 0.9
DNSTY 790. 790. 790. 790. 790. 790. 790.
THICK .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9
FLOOR
COND .0001 .0001 .0001 .0001 .0001 .0001 .0001
SPHT 1.4 1.4 1.4 1.4 1.4 1.4 1.4
DNSTY 300. 300. 300. 300. 300. 300. 300.
THICK .0127 .0127 .0127 .0127 .0127 .0127 .0127
EMISS 1.0 1.0 1.0 1.0 1.0 1.0 1.0
LFBO 2
LFBT 1
LFPOS 1
CHEMI 1.0 0.0 0.0 0.0 0.0 0.0 20000 300
LFMAX 3
FMASS 0.0 .003 .003 .0004
FAREA .5 .5 .5 .5
FHIGH .0 .0 .0 .0
FTIME 5 850 45
CO .02 .02 .02 .02
O2 -1.5 -1.5 -1.5 -1.5
CO2 1.6 1.6 1.6 1.6
OD .02 .02 .02 .02
CT 1. 1. 1. 1.

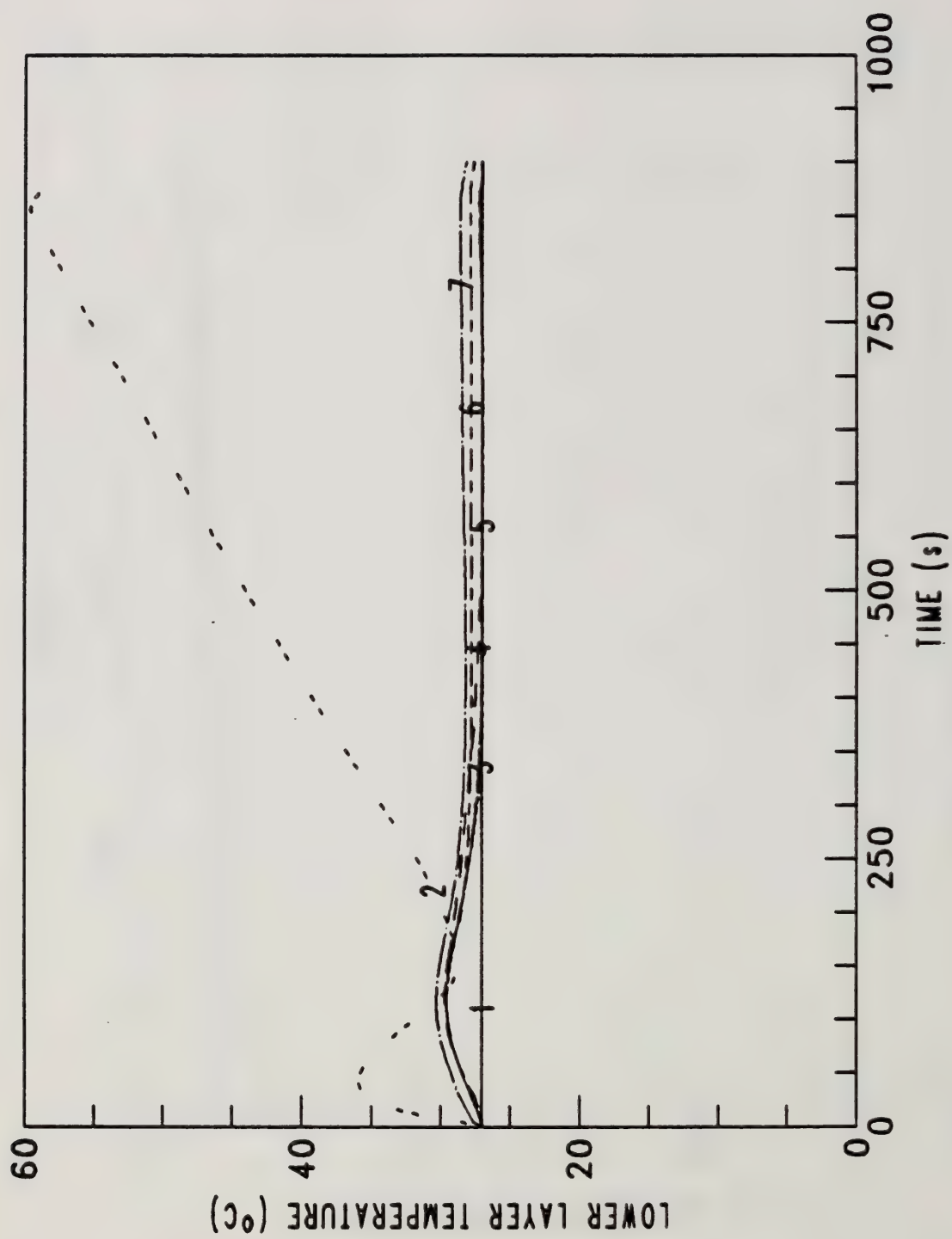
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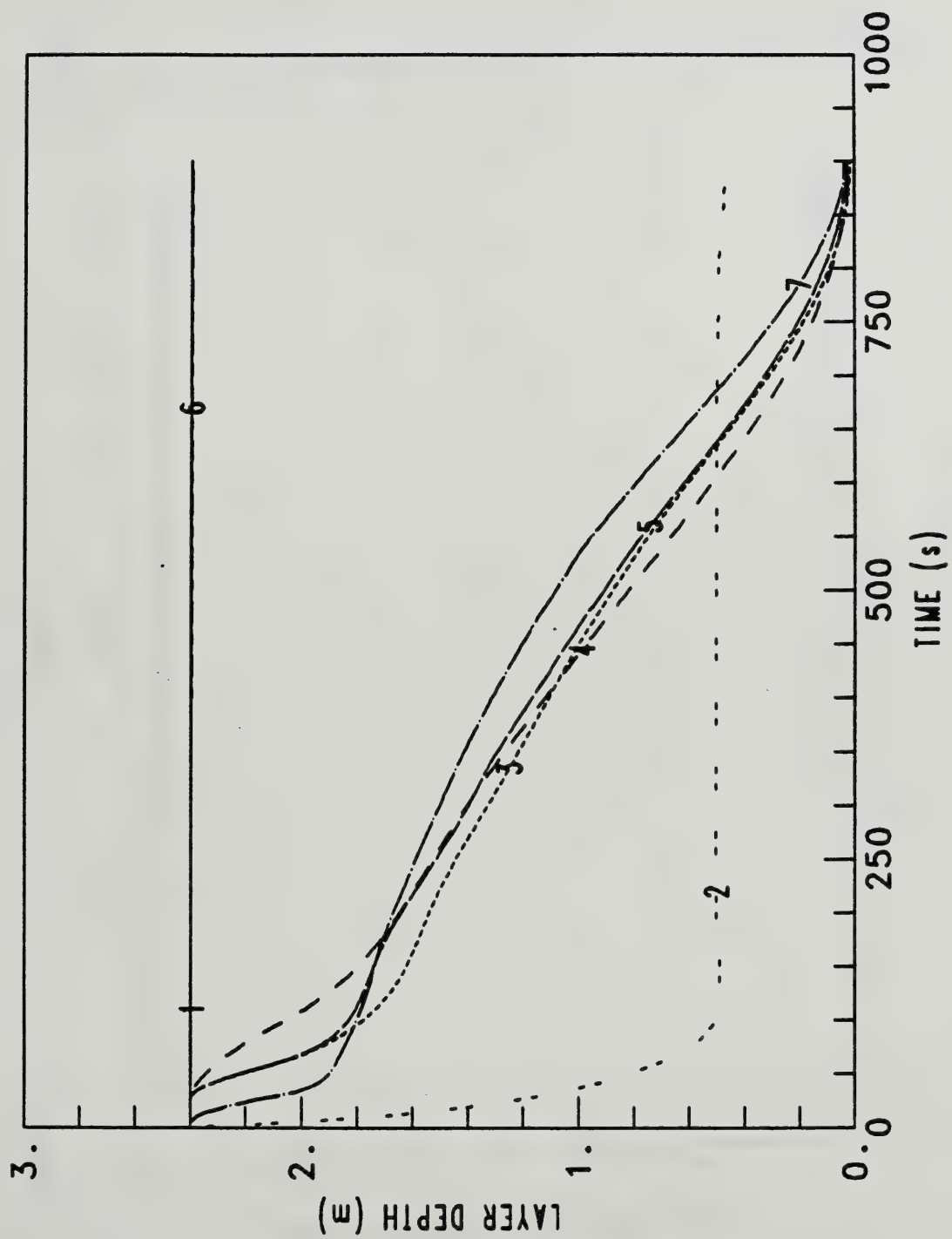


D. OUTPUT - GRAPHS FOR FIRE #3

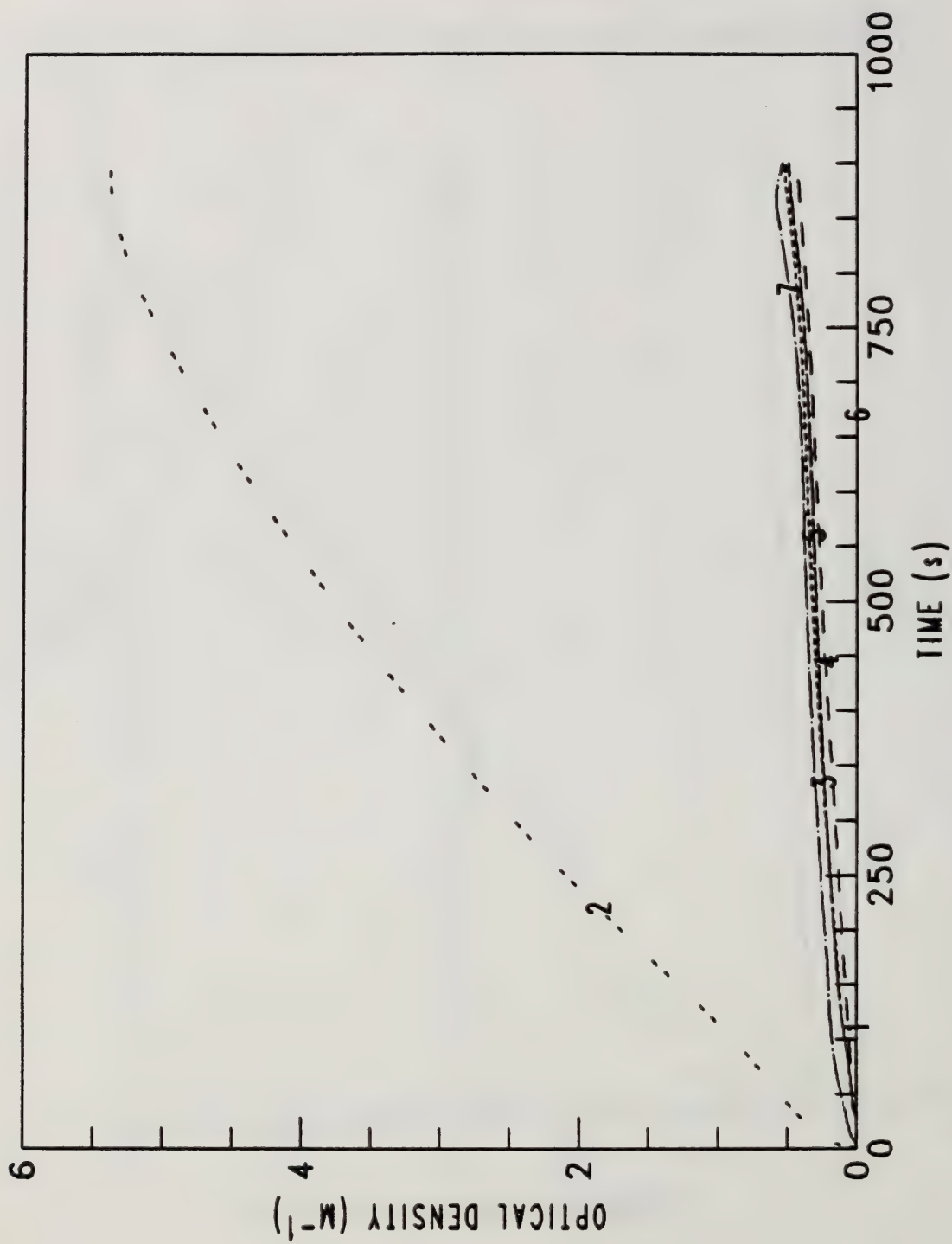


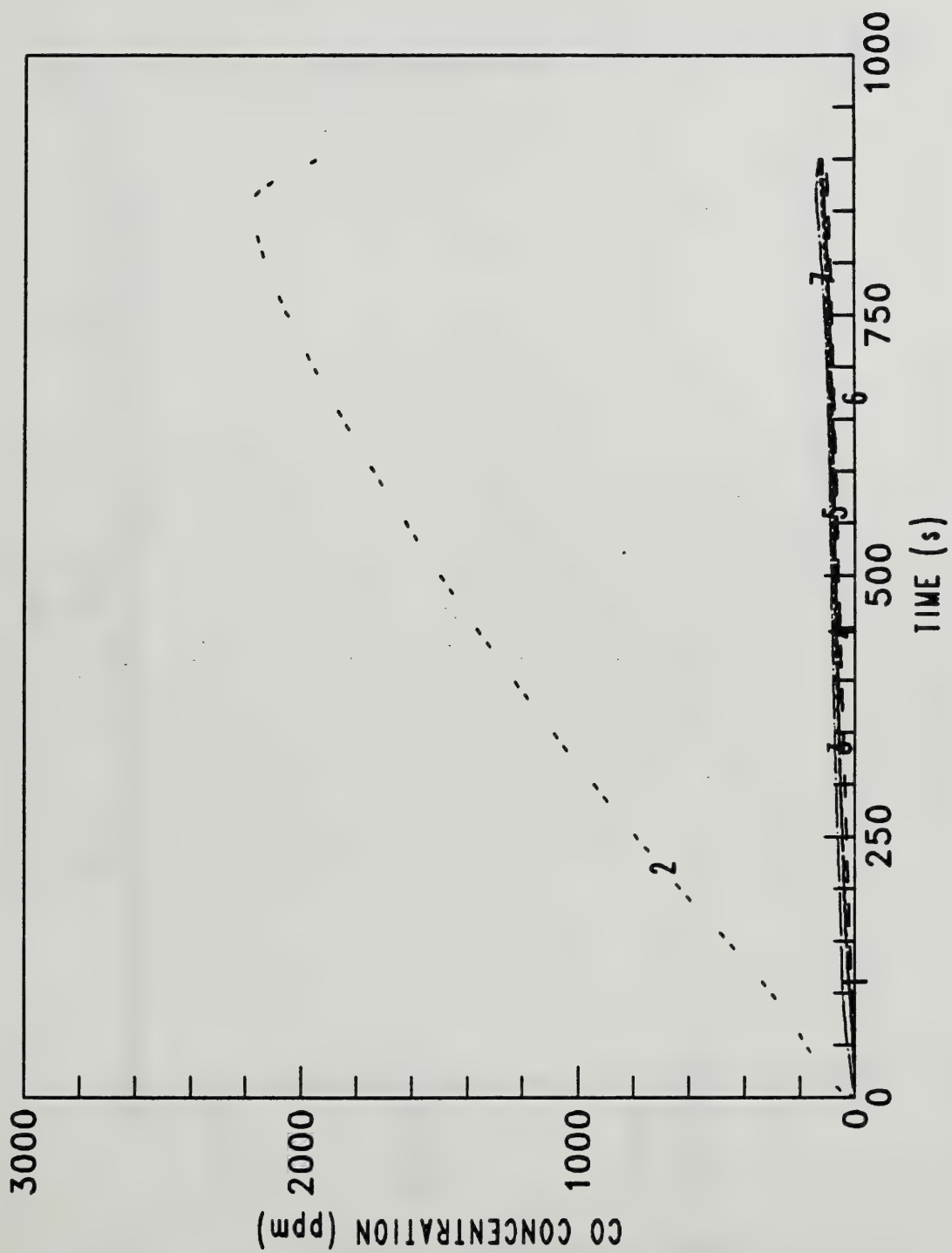


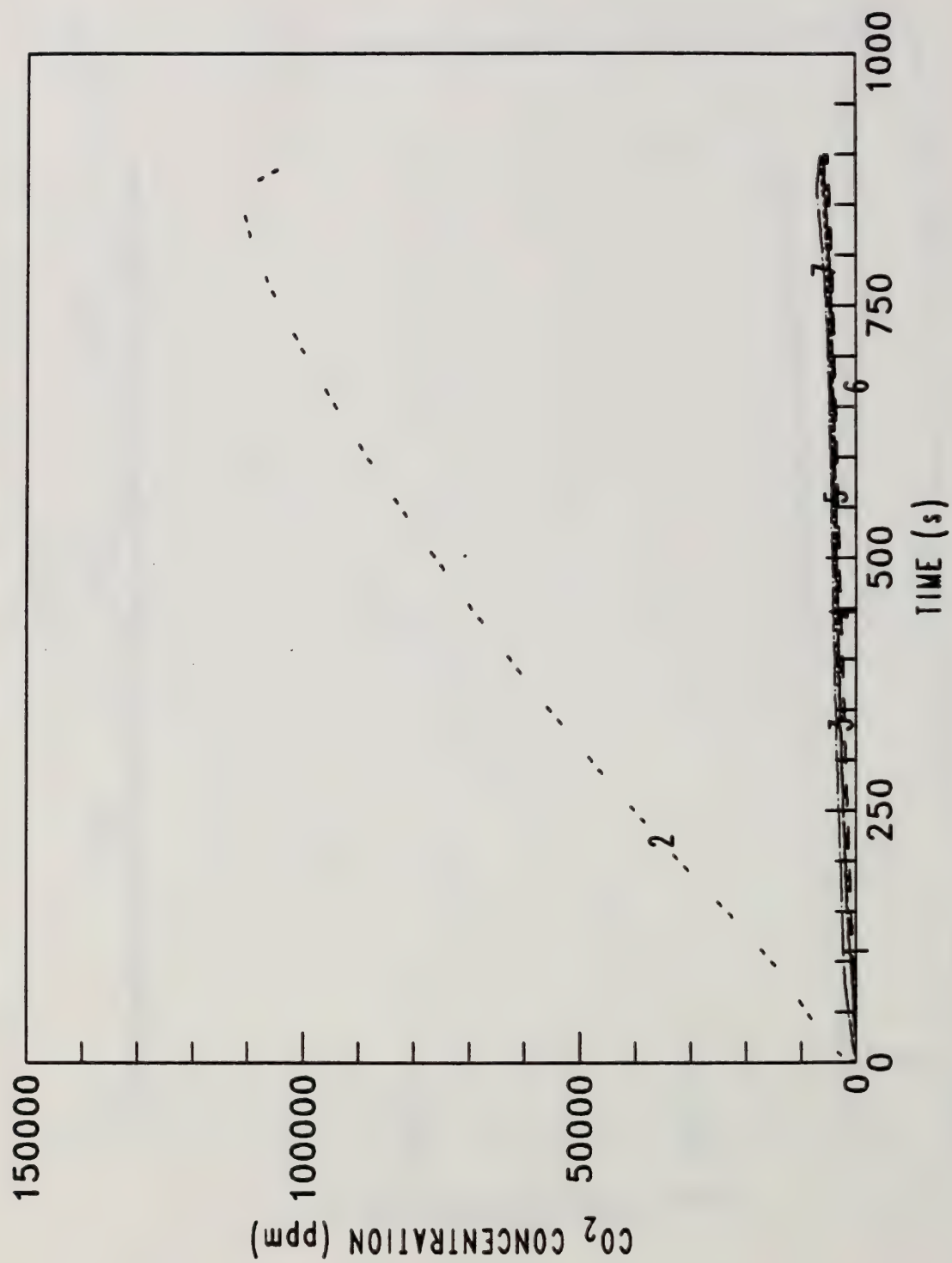


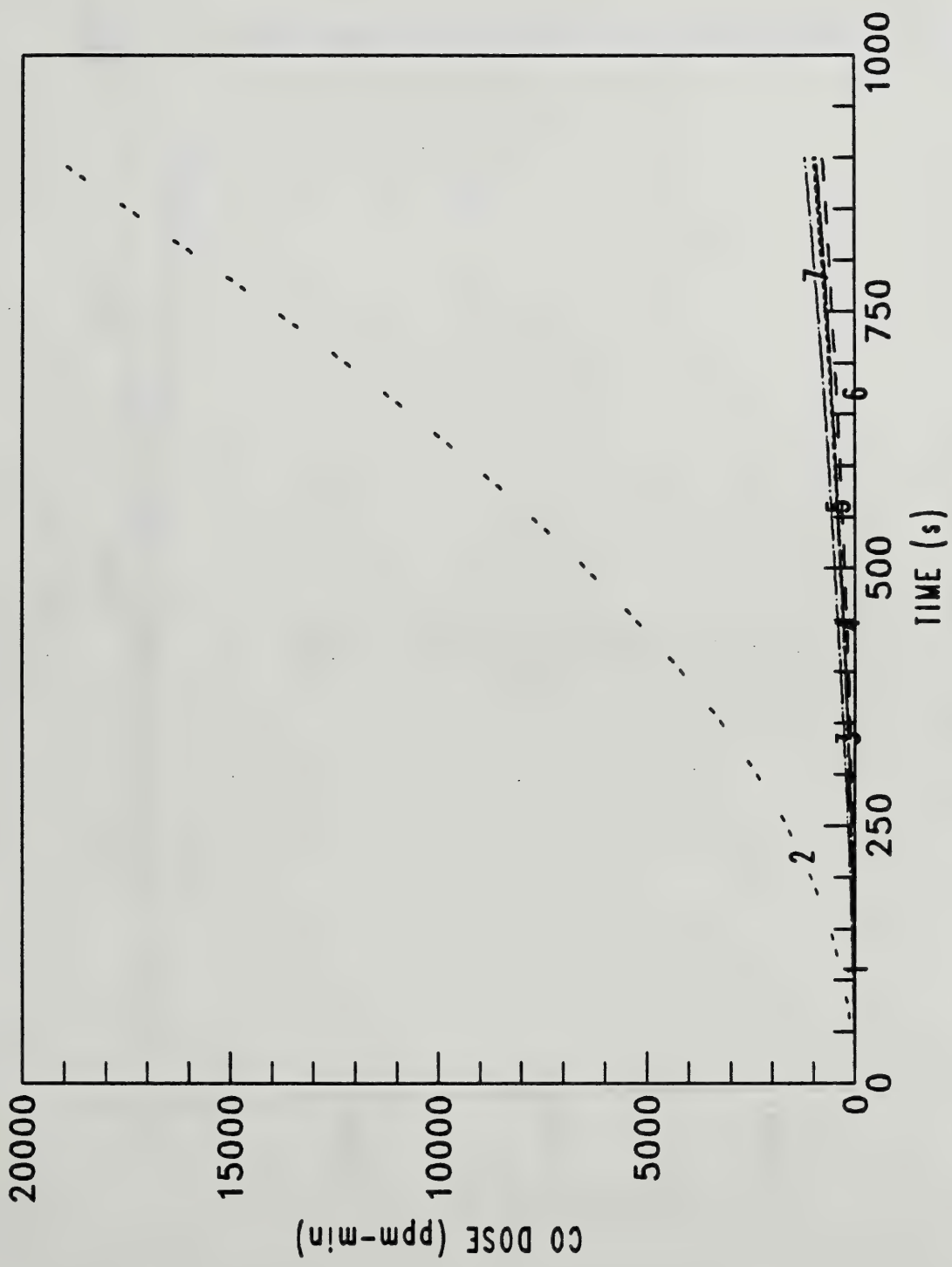


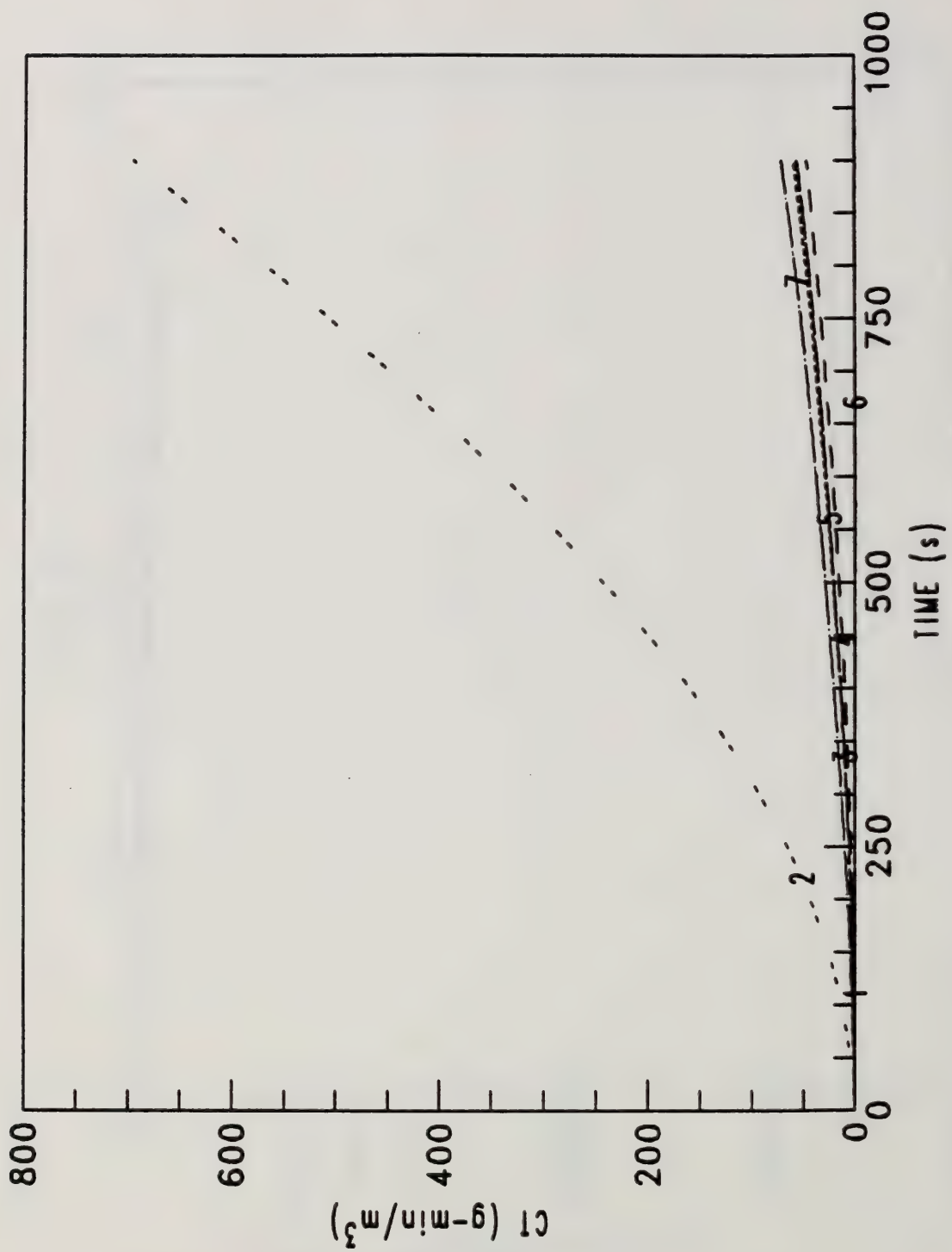














E. OUTPUT - COMPUTER FILE FOR FIRE #3 :

## RANCH SCENARIO 3 FLAMING MATTRESS IN BR

TOTAL COMPARTMENTS = 7  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	3.6	3.4	4.5	2.7	2.7	5.5
DEPTH	3.8	3.0	3.0	8.1	3.8	3.8	1.2
HEIGHT	2.4	2.4	2.4	2.4	2.4	2.4	2.4
AREA	13.7	10.8	10.2	36.4	10.3	10.3	6.6
VOLUME	32.8	25.9	24.5	87.5	24.6	24.6	15.8
CEILING	2.4	2.4	2.4	2.4	2.4	2.4	2.4
FLOOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	1.10	1.10	1.10
	HH=	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.00	0.00	0.00	1.10	0.00	0.00	1.10	0.00
	HH=	0.00	0.00	0.00	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 ( 1 )	BW=	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 ( 1 )	BW=	1.10	0.01	1.10	1.10	1.10	0.00	0.00	0.00
	HH=	0.02	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	2.10	2.10	2.10	2.10	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02
THICK=	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02
EMISS=	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

UPPER WALL

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

LOWER WALL

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

FIRE ROOM NUMBER IS 2

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 3

TOTAL TIME INTERVAL = 900

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
 AMBIENT AIR TEMPERATURE (K) = 300.  
 AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
 EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 20000.

FMASS=	0.00E+00	3.00E-03	3.00E-03	4.00E-04
FHIGH=	0.00E+00	0.00E+00	0.00E+00	0.00E+00
O2=	-1.5	-1.5	-1.5	-1.5
CO2=	1.6	1.6	1.6	1.6
CO=	2.00E-02	2.00E-02	2.00E-02	2.00E-02
OD=	2.00E-02	2.00E-02	2.00E-02	2.00E-02
CT=	1.0	1.0	1.0	1.0
FTIME=	5.0	8.50E+02	45.	

[illegible]

	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2	/				2.070E+05
CO2	/				0.000E+00
CO	/				0.000E+00
OD	/				0.000E+00
CT	GM/M3				0.000E+00



TIME = 100.0 SECONDS.

U. TEMP	300.0	388.9	324.2	321.0	327.0	300.0	362.6
L. TEMP	300.0	300.2	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	13.1	12.0	33.0	10.6	0.0	6.6
UL. THICK	0.0	1.2	1.2	0.9	1.0	0.0	1.0
CE. TEMP	300.0	317.4	303.1	302.3	303.5	300.0	311.4
UW. TEMP	300.0	312.0	302.1	301.5	302.4	300.0	307.8
LW. TEMP	300.0	301.5	300.2	300.2	300.2	300.0	300.6
FL. TEMP	300.0	302.4	300.4	300.3	300.4	300.0	301.0
PLUME	0.000E+00	4.654E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	3.536E-08	3.372E-02	8.068E-03	5.917E-03	8.595E-03	2.769E-09	2.346E-02
QSCW	-9.857E-09	7.139E-02	1.282E-02	1.240E-02	1.346E-02	-6.407E-10	2.971E-02
	1.411E-10	6.474E-01	1.406E-01	1.216E-01	1.618E-01	8.190E-12	4.319E-01
	6.737E-08	-7.293E-03	-6.148E-04	-5.181E-04	-6.598E-04	2.696E-09	-2.218E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.972E+05	2.018E+05	2.025E+05	2.013E+05	2.070E+05	1.982E+05
CO2 PPM	0.000E+00	6.501E+03	3.450E+03	2.973E+03	3.765E+03	0.000E+00	5.822E+03
CO PPM	0.000E+00	128.	67.8	58.4	74.0	0.000E+00	114.
OD 1/M	0.000E+00	0.391	0.249	0.217	0.270	0.000E+00	0.376
CT GM/M3	0.000E+00	7.44	3.15	2.42	3.34	0.000E+00	6.38



TIME = 200.0 SECONDS.

U. TEMP	300.0	407.6	325.7	320.5	327.1	300.0	350.0
L. TEMP	300.0	300.8	300.2	300.1	300.2	300.0	300.2
UL. VOLUM	0.0	16.2	17.3	57.4	16.3	0.0	9.6
UL. THICK	0.0	1.5	1.7	1.6	1.6	0.0	1.5
CE. TEMP	300.0	327.5	305.3	303.9	305.8	300.0	314.1
UW. TEMP	300.0	319.4	303.6	302.7	304.0	300.0	309.9
LW. TEMP	300.0	303.2	300.6	300.5	300.6	300.0	301.2
FL. TEMP	300.0	305.2	301.0	300.9	301.0	300.0	301.9
PLUME	0.000E+00	3.187E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	9.181E-07	3.848E-02	6.534E-03	3.020E-03	6.069E-03	4.808E-09	1.102E-02
	-2.582E-07	1.212E-01	2.232E-02	1.953E-02	2.252E-02	-1.192E-09	3.842E-02
QSCW	9.912E-09	7.301E-01	1.351E-01	1.026E-01	1.423E-01	9.907E-12	2.731E-01
	1.253E-06	-1.763E-02	-1.827E-03	-1.679E-03	-1.955E-03	2.971E-09	-4.898E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.939E+05	1.996E+05	2.007E+05	1.992E+05	2.070E+05	1.981E+05
CO2	PPM	0.000E+00	8.694E+03	4.888E+03	4.186E+03	5.161E+03	0.000E+00	5.918E+03
CO	PPM	0.000E+00	171.	96.0	82.2	101.	0.000E+00	116.
OD	1/M	0.000E+00	0.500	0.351	0.306	0.369	0.000E+00	0.396
CT	GM/M3	0.000E+00	17.9	10.5	8.81	11.2	0.000E+00	15.6

TIME = 300.0 SECONDS.

U. TEMP	300.0	430.6	322.8	318.4	323.1	300.0	338.6
L. TEMP	300.1	302.8	300.8	300.5	300.7	300.0	300.7
UL. VOLUM	0.0	20.6	21.4	73.9	20.7	0.0	12.5
UL. THICK	0.0	1.9	2.1	2.0	2.0	0.0	1.9
CE. TEMP	300.0	338.0	306.1	304.5	306.4	300.0	313.8
UW. TEMP	300.0	327.4	304.3	303.1	304.5	300.0	309.9
LW. TEMP	300.0	306.2	301.0	300.8	301.0	300.0	301.7
FL. TEMP	300.0	309.7	301.7	301.4	301.6	300.0	302.7
PLUME	0.000E+00	1.837E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	6.221E-06	5.937E-02	4.597E-03	1.925E-03	3.973E-03	5.855E-09	5.654E-03
	-1.763E-06	2.147E-01	2.905E-02	2.338E-02	2.856E-02	-1.477E-09	4.567E-02
QSCW	1.164E-07	8.556E-01	1.032E-01	8.107E-02	1.031E-01	1.071E-11	1.701E-01
	6.998E-06	-3.264E-02	-2.180E-03	-2.011E-03	-2.489E-03	2.736E-09	-6.353E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.883E+05	1.986E+05	1.997E+05	1.985E+05	2.070E+05	1.976E+05
CO2 PPM	0.000E+00	1.239E+04	5.559E+03	4.823E+03	5.654E+03	0.000E+00	6.220E+03
CO PPM	0.000E+00	243.	109.	94.7	111.	0.000E+00	122.
OD 1/M	0.000E+00	0.674	0.403	0.355	0.410	0.000E+00	0.430
CT GM/M3	0.000E+00	31.7	19.5	16.7	20.5	0.000E+00	25.3

TIME = 400.0 SECONDS.

U. TEMP	300.0	455.9	319.4	316.0	319.4	300.0	331.7
L. TEMP	300.3	308.9	302.1	301.4	301.7	300.0	301.9
UL. VOLUM	0.0	23.9	23.8	82.6	23.5	0.0	14.5
UL. THICK	0.0	2.2	2.3	2.3	2.3	0.0	2.2
CE. TEMP	300.0	350.3	306.2	304.7	306.4	300.0	313.2
UW. TEMP	300.0	336.8	304.4	303.3	304.6	300.0	309.6
LW. TEMP	300.0	311.4	301.4	301.1	301.4	300.0	302.4
FL. TEMP	300.0	317.8	302.4	301.9	302.3	300.0	303.8
PLUME	0.000E+00	1.007E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.400E-05	8.905E-02	3.349E-03	1.200E-03	2.792E-03	5.945E-09	3.593E-03
	-6.852E-06	3.595E-01	3.143E-02	2.362E-02	3.115E-02	-1.528E-09	5.480E-02
QSCW	6.407E-07	9.835E-01	7.599E-02	6.175E-02	7.421E-02	8.580E-12	1.159E-01
	2.319E-05	-4.471E-02	-3.394E-04	-8.211E-04	-1.140E-03	1.985E-09	-5.882E-03

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	1.792E+05	1.978E+05	1.990E+05	1.978E+05	2.070E+05	1.963E+05
CO2	PPM	/	0.000E+00	1.838E+04	6.124E+03	5.319E+03	6.131E+03	0.000E+00	7.025E+03
CO	PPM	/	0.000E+00	361.	120.	104.	120.	0.000E+00	138.
OD	1/M	/	0.000E+00	0.944	0.449	0.394	0.449	0.000E+00	0.496
CT	GM/M3	/	0.000E+00	50.8	29.7	25.6	30.7	0.000E+00	36.3

TIME = 500.0 SECONDS.

U. TEMP	300.0	484.5	316.1	313.6	316.0	300.0	325.0
L. TEMP	300.4	325.3	303.8	302.3	302.8	300.0	303.4
UL. VOLUM	0.0	25.7	24.4	85.8	24.3	0.0	15.5
UL. THICK	0.0	2.4	2.4	2.4	2.4	0.0	2.3
CE. TEMP	300.0	364.0	306.1	304.7	306.3	300.0	312.5
UW. TEMP	300.0	347.5	304.4	303.3	304.5	300.0	309.2
LW. TEMP	300.0	319.1	301.7	301.3	301.7	300.0	303.0
FL. TEMP	300.0	330.7	302.8	302.2	302.8	300.0	304.8
PLUME	0.000E+00	2.867E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	5.762E-05	1.344E-01	1.976E-03	4.713E-04	1.582E-03	5.188E-09	1.140E-03
	-1.655E-05	5.271E-01	2.757E-02	2.105E-02	2.796E-02	-1.360E-09	5.443E-02
QSCW	1.901E-06	1.128E+00	5.249E-02	4.500E-02	5.082E-02	5.197E-12	6.980E-02
	4.491E-05	-2.216E-02	1.383E-04	6.126E-06	1.007E-06	9.794E-10	-4.048E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	1.648E+05	1.969E+05	1.983E+05	1.969E+05	2.070E+05	1.952E+05
CO2	PPM	/	0.000E+00	2.790E+04	6.725E+03	5.778E+03	6.683E+03	0.000E+00	7.824E+03
CO	PPM	/	0.000E+00	548.	132.	113.	131.	0.000E+00	154.
OD	1/M	/	0.000E+00	1.35	0.498	0.431	0.495	0.000E+00	0.564
CT	GM/M3	/	0.000E+00	77.7	41.0	35.5	42.0	0.000E+00	48.9



TIME = 600.0 SECONDS.

U. TEMP	300.4	504.1	313.2	311.3	313.2	300.0	321.5
L. TEMP	300.5	336.5	303.9	302.9	303.5	300.0	304.5
UL. VOLUM	5.9	25.8	24.5	86.7	24.5	0.0	15.8
UL. THICK	0.4	2.4	2.4	2.4	2.4	0.0	2.4
CE. TEMP	300.0	378.0	305.9	304.6	306.0	300.0	311.9
UW. TEMP	300.0	358.6	304.3	303.3	304.4	300.0	308.8
LW. TEMP	300.0	327.5	301.9	301.4	301.8	300.0	303.3
FL. TEMP	300.0	344.1	303.1	302.4	303.1	300.0	305.5
PLUME	0.000E+00	2.090E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.365E-04	1.606E-01	8.676E-04	-1.933E-04	5.834E-04	4.110E-09	2.817E-04
	6.699E-05	6.170E-01	2.279E-02	1.783E-02	2.337E-02	-1.060E-09	4.862E-02
QSCW	6.814E-04	1.166E+00	3.502E-02	3.145E-02	3.389E-02	4.994E-12	4.894E-02
	5.235E-05	-3.373E-02	1.111E-04	5.561E-05	4.329E-05	1.937E-10	-2.354E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.069E+05	1.454E+05	1.961E+05	1.977E+05	1.962E+05	2.070E+05	1.939E+05
CO2	PPM	/	39.9	4.079E+04	7.261E+03	6.161E+03	7.196E+03	0.000E+00	8.717E+03
CO	PPM	/	0.784	801.	143.	121.	141.	0.000E+00	171.
OD	1/M	/	3.110E-03	1.89	0.543	0.463	0.538	0.000E+00	0.635
CT	GM/M3	/	1.565E-02	116.	53.3	46.1	54.3	0.000E+00	63.1



TIME = 700.0 SECONDS.

U. TEMP	300.4	515.2	311.7	309.9	311.7	300.0	319.4
L. TEMP	300.5	350.0	303.3	303.1	303.4	300.0	305.7
UL. VOLUM	16.8	25.9	24.5	87.2	24.6	0.0	15.8
UL. THICK	1.2	2.4	2.4	2.4	2.4	0.0	2.4
CE. TEMP	300.0	389.4	305.8	304.5	305.9	300.0	311.6
UW. TEMP	300.0	367.9	304.2	303.2	304.3	300.0	308.6
LW. TEMP	300.0	335.5	302.0	301.6	302.0	300.0	303.6
FL. TEMP	300.0	356.7	303.3	302.6	303.3	300.0	306.0
PLUME	0.000E+00	1.168E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.102E-04	1.738E-01	4.114E-04	-5.183E-04	1.816E-04	3.447E-09	-2.312E-04
	1.063E-04	6.652E-01	1.987E-02	1.553E-02	2.044E-02	-8.644E-10	4.278E-02
QSCW	6.502E-04	1.144E+00	2.682E-02	2.363E-02	2.592E-02	5.655E-12	3.737E-02
	5.507E-05	-2.772E-02	5.024E-07	6.753E-05	7.066E-06	3.167E-11	-4.903E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.069E+05	1.267E+05	1.951E+05	1.971E+05	1.952E+05	2.070E+05	1.933E+05
CO2	PPM	76.0	5.319E+04	7.937E+03	6.609E+03	7.852E+03	0.000E+00	9.707E+03
CO	PPM	1.49	1.045E+03	156.	130.	154.	0.000E+00	191.
OD	1/M	5.926E-03	2.42	0.596	0.499	0.590	0.000E+00	0.712
CT	GM/M3	0.127	168.	66.9	57.6	67.7	0.000E+00	79.2

TIME = 800.0 SECONDS.

U. TEMP	300.4	524.2	310.9	309.0	310.9	300.0	318.5
L. TEMP	300.5	360.4	303.4	302.8	303.4	300.0	311.7
UL. VOLUM	20.9	25.9	24.5	87.4	24.6	0.0	15.8
UL. THICK	1.5	2.4	2.4	2.4	2.4	0.0	2.4
CE. TEMP	300.0	399.7	305.7	304.4	305.8	300.0	311.6
UW. TEMP	300.0	376.3	304.2	303.2	304.2	300.0	308.5
LW. TEMP	300.0	343.0	302.1	301.6	302.1	300.0	304.1
FL. TEMP	300.0	367.9	303.4	302.7	303.5	300.0	306.4
PLUME	0.000E+00	1.082E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.837E-04	1.826E-01	1.771E-04	-7.039E-04	-2.839E-05	3.098E-09	-2.860E-04
	1.099E-04	7.022E-01	1.803E-02	1.393E-02	1.855E-02	-7.693E-10	3.884E-02
QSCW	5.438E-04	1.112E+00	2.232E-02	1.890E-02	2.148E-02	5.442E-12	3.246E-02
	5.285E-05	-3.207E-02	5.107E-07	1.080E-05	-4.278E-06	4.083E-12	1.285E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.069E+05	1.088E+05	1.948E+05	1.966E+05	1.948E+05	2.070E+05	1.939E+05
CO2 PPM	98.4	6.510E+04	8.750E+03	7.137E+03	8.635E+03	0.000E+00	1.092E+04
CO PPM	1.93	1.279E+03	172.	140.	170.	0.000E+00	214.
OD 1/M	7.675E-03	2.91	0.659	0.541	0.650	0.000E+00	0.803
CT GM/M3	0.289	231.	81.8	70.0	82.4	0.000E+00	97.2

TIME = 900.0 SECONDS.

U. TEMP	300.3	470.8	310.3	308.4	310.3	300.0	316.5
L. TEMP	300.5	343.3	304.2	303.0	304.0	300.0	303.5
UL. VOLUM	23.1	25.5	24.3	86.6	24.4	0.0	15.7
UL. THICK	1.7	2.4	2.4	2.4	2.4	0.0	2.4
CE. TEMP	300.0	402.2	305.7	304.4	305.8	300.0	311.5
UW. TEMP	300.0	378.9	304.2	303.2	304.2	300.0	308.5
LW. TEMP	300.0	347.3	302.2	301.7	302.2	300.0	304.5
FL. TEMP	300.0	372.2	303.6	302.8	303.6	300.0	306.6
PLUME	0.000E+00	8.259E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.625E-04	3.648E-02	-7.394E-05	-8.771E-04	-2.818E-04	2.415E-09	-1.472E-03
	1.046E-04	5.062E-01	1.637E-02	1.261E-02	1.675E-02	-8.651E-10	3.499E-02
QSCW	4.579E-04	5.286E-01	1.891E-02	1.572E-02	1.796E-02	-7.082E-13	2.102E-02
	4.788E-05	-2.018E-01	8.153E-05	1.890E-05	4.097E-05	-1.500E-10	-1.139E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.068E+05	1.067E+05	1.945E+05	1.963E+05	1.947E+05	2.070E+05	1.925E+05
CO2	PPM	123.	6.677E+04	9.622E+03	7.724E+03	9.460E+03	0.000E+00	1.163E+04
CO	PPM	2.43	1.312E+03	189.	152.	186.	0.000E+00	228.
OD	1/M	9.627E-03	3.32	0.726	0.586	0.714	0.000E+00	0.860
CT	GM/M3	0.502	306.	98.3	83.4	98.7	0.000E+00	117.

INPUT FAST FILE : SYS:RAS9B.DMP/G  
INPUT EXITT FILE : SCENTHR.EVA  
TENABS OUTPUT FILE: SCENTHR.TEN

OCCUPANT	1	ROOM NUMBER	ENTER TIME (S)
		4	0
		7	35
		4	45
		8	47

OCCUPANT	2	ROOM NUMBER	ENTER TIME (S)
		1	0
		7	33
		6	39
		7	40
		4	42
		8	45

OCCUPANT	3	ROOM NUMBER	ENTER TIME (S)
		1	0
		7	33
		4	40
		8	42

OCCUPANT	4	ROOM NUMBER	ENTER TIME (S)
		6	0
		7	43
		4	45
		8	47

OCCUPANT	5	ROOM NUMBER	ENTER TIME (S)
		4	0
		7	35
		4	45
		8	47

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON	1						
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
1.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 2

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
1.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 3

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
1.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 4

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
1.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

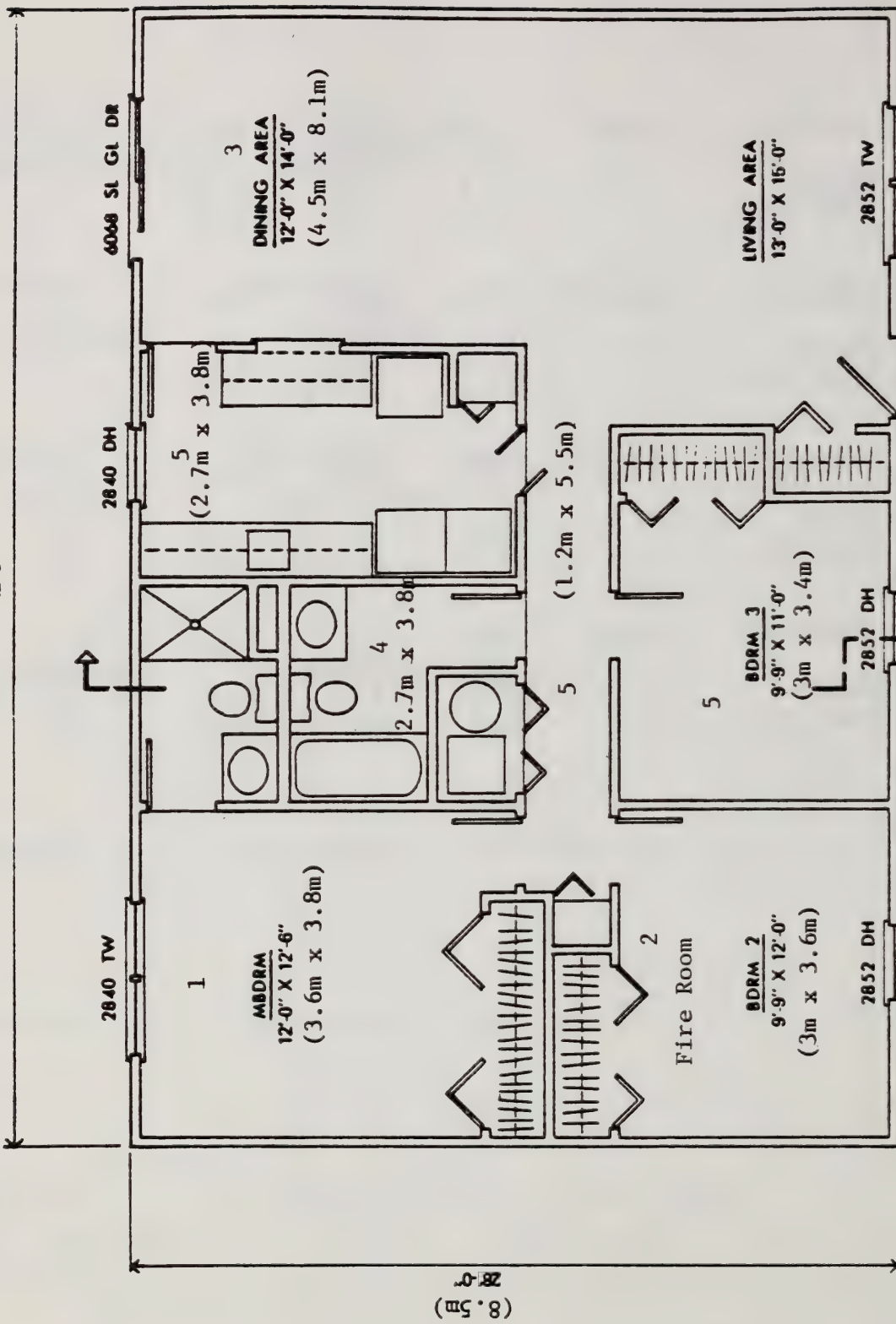
## PERSON 5

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
1.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.



(12.8m)

42'-0"



G - Floor Plan for FIRE #3  
(5 Compartments)

FLOOR PLAN OF A TYPICAL RANCH HOUSE



AUG. 10, 1977

NBS

VERSN 017 RANCH SCENARIO 3 FLAMING MATTRESS IN BR  
 TIMES 900 100 0 0 0 .1  
 NROOM 5  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 0.0 0.0 0.0 0.0  
 WIDTH 3.6 3.0 4.5 2.7 4.0  
 DEPTH 3.8 3.6 8.1 3.8 6.7  
 HEIGH 2.4 2.4 2.4 2.4 2.4  
 HVENT 1 5 1.1 .02 0.0  
 HVENT 2 5 .01 2.1 0.0  
 HVENT 3 5 1.1 2.1 0.0  
 HVENT 4 5 1.1 2.1 0.0  
 HVENT 1 6 1.1 0.2 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790. 790. 790. 790. 790.  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0  
 LFBO 2  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 20000 300  
 LFMAX 3  
 FMASS 0.0 .003 .003 .0004  
 FAREA .5 .5 .5 .5 .5  
 FHIGH .0 .0 .0 .0 .0  
 FTIME 5 850 45  
 CO .02 .02 .02 .02  
 O2 -1.5 -1.5 -1.5 -1.5  
 CO2 1.6 1.6 1.6 1.6  
 OD .02 .02 .02 .02  
 CT 1. 1. 1. 1.



I. OUTPUT - COMPUTER FILES FOR FIRE #3

## RANCH SCENARIO 3 FLAMING MATTRESS IN BR

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	3.6	3.0	4.5	2.7	4.0
DEPTH	3.8	3.6	8.1	3.8	6.7
HEIGHT	2.4	2.4	2.4	2.4	2.4
AREA	13.7	10.8	36.4	10.3	26.8
VOLUME	32.8	25.9	87.5	24.6	64.3
CEILING	2.4	2.4	2.4	2.4	2.4
FLOOR	0.0	0.0	0.0	0.0	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	1.10	1.10
	HT=	0.00	0.00	0.00	0.00	0.02	0.02	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	0.02	0.02	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.01	0.01	0.00
	HT=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	1.10	0.00
	HT=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	1.10	0.00
	HT=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	1.10	0.01	1.10	1.10	0.00	0.00	0.00
	HT=	0.02	2.10	2.10	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	2.10	2.10	2.10	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

## FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02



THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2  
TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 3  
TOTAL TIME INTERVAL = 900  
FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 20000.

FMASS= 0.00E+00 3.00E-03 3.00E-03 4.00E-04  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.5 -1.5 -1.5 -1.5  
CO2= 1.6 1.6 1.6 1.6  
CO= 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
OD= 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
CT= 1.0 1.0 1.0 1.0  
FTIME= 5.0 8.50E+02 45.

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	300.0	387.3	313.3	318.6	346.6
L. TEMP	300.0	300.2	300.0	300.0	300.1
UL. VOLUM	0.0	13.0	24.3	11.7	28.3
UL. THICK	0.0	1.2	0.7	1.1	1.1
CE. TEMP	300.0	317.3	301.0	301.9	307.0
UW. TEMP	300.0	311.9	300.7	301.3	304.7
LW. TEMP	300.0	301.5	300.1	300.1	300.6
FL. TEMP	300.0	302.4	300.1	300.2	301.0
PLUME	0.000E+00	4.710E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.880E-08	3.200E-02	4.352E-03	7.105E-03	1.230E-02
	-8.012E-09	6.983E-02	6.292E-03	8.599E-03	3.378E-02
QSCW	1.095E-10	6.311E-01	6.964E-02	1.044E-01	3.157E-01
	5.893E-08	-7.286E-03	-1.700E-04	-2.820E-04	-2.302E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	1.974E+05	2.040E+05	2.027E+05	1.995E+05
CO2	PPM	/	0.000E+00	6.328E+03	2.010E+03	2.824E+03	4.993E+03
CO	PPM	/	0.000E+00	124.	39.5	55.5	98.1
OD	1/M	/	0.000E+00	0.383	0.150	0.208	0.337
CT	GM/M3	/	0.000E+00	7.49	1.36	1.94	4.74

TIME = 200.0 SECONDS.

U. TEMP	300.0	405.5	317.1	320.4	344.4
L. TEMP	300.0	300.8	300.1	300.1	300.3
UL. VOLUM	0.0	15.4	50.2	17.0	37.2
UL. THICK	0.0	1.4	1.4	1.7	1.4
CE. TEMP	300.0	327.0	302.8	303.6	310.5
UW. TEMP	300.0	319.1	301.9	302.5	307.2
LW. TEMP	300.0	303.1	300.3	300.4	301.3
FL. TEMP	300.0	305.0	300.6	300.7	302.1
PLUME	0.000E+00	3.448E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	1.169E-06	3.491E-02	2.999E-03	5.885E-03	3.649E-03
	-3.289E-07	1.130E-01	1.393E-02	1.583E-02	4.507E-02
QSCW	1.357E-08	7.129E-01	8.469E-02	1.045E-01	2.562E-01
	1.673E-06	-1.675E-02	-1.032E-03	-1.135E-03	-5.583E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.944E+05	2.014E+05	2.005E+05	1.981E+05
CO2	PPM	0.000E+00	8.301E+03	3.737E+03	4.338E+03	5.911E+03
CO	PPM	0.000E+00	163.	73.4	85.2	116.
OD	1/M	0.000E+00	0.479	0.276	0.317	0.402
CT	GM/M3	0.000E+00	17.6	6.77	8.27	13.7

TIME = 300.0 SECONDS.

U. TEMP	300.0	423.6	316.3	320.5	338.2
L. TEMP	300.1	302.2	300.3	300.4	300.8
UL. VOLUM	0.0	19.0	67.6	20.6	46.5
UL. THICK	0.0	1.8	1.9	2.0	1.7
CE. TEMP	300.0	336.4	303.6	304.7	311.5
UW. TEMP	300.0	326.2	302.4	303.3	308.1
LW. TEMP	300.0	305.6	300.6	300.7	301.9
FL. TEMP	300.0	308.7	301.0	301.2	303.1
PLUME	0.000E+00	2.334E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	8.348E-06	4.756E-02	2.142E-03	5.046E-03	-9.866E-05
QSCW	-2.369E-06	1.822E-01	1.796E-02	2.239E-02	4.958E-02
	1.693E-07	7.974E-01	7.281E-02	9.601E-02	1.882E-01
	9.267E-06	-3.002E-02	-1.613E-03	-1.739E-03	-7.352E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.903E+05	2.002E+05	1.990E+05	1.975E+05
CO2 PPM	0.000E+00	1.105E+04	4.528E+03	5.337E+03	6.295E+03
CO PPM	0.000E+00	217.	88.9	105.	124.
OD 1/M	0.000E+00	0.611	0.335	0.390	0.436
CT GM/M3	0.000E+00	30.5	14.1	16.8	23.7



TIME = 400.0 SECONDS.

U. TEMP	300.0	446.2	315.1	318.9	332.8
L. TEMP	300.3	305.6	300.8	301.3	301.7
UL. VOLUM	0.0	22.0	78.4	23.2	54.7
UL. THICK	0.0	2.0	2.2	2.3	2.0
CE. TEMP	300.0	347.2	303.9	305.3	311.6
UW. TEMP	300.0	334.5	302.7	303.7	308.3
LW. TEMP	300.0	309.5	300.8	301.1	302.4
FL. TEMP	300.0	314.7	301.4	301.8	303.9
PLUME	0.000E+00	1.462E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.933E-05	6.998E-02	1.627E-03	4.098E-03	-1.375E-03
	-8.386E-06	2.882E-01	2.003E-02	2.682E-02	5.150E-02
QSCW	8.229E-07	9.119E-01	6.093E-02	7.916E-02	1.380E-01
	2.746E-05	-4.632E-02	-1.343E-03	-1.074E-03	-7.092E-03

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.845E+05	1.993E+05	1.980E+05	1.966E+05
CO2	PPM	0.000E+00	1.551E+04	5.089E+03	5.971E+03	6.720E+03
CO	PPM	0.000E+00	305.	100.0	117.	132.
OD	1/M	0.000E+00	0.814	0.378	0.438	0.473
CT	GM/M3	0.000E+00	47.3	22.6	26.7	34.5

TIME = 500.0 SECONDS.

U. TEMP	300.0	467.0	313.6	316.9	328.5
L. TEMP	300.5	313.2	301.6	302.6	303.2
UL. VOLUM	0.0	24.4	84.1	24.4	60.4
UL. THICK	0.0	2.3	2.3	2.4	2.3
CE. TEMP	300.0	358.6	304.1	305.5	311.5
UW. TEMP	300.0	343.4	302.9	303.9	308.3
LW. TEMP	300.0	315.3	301.1	301.4	302.9
FL. TEMP	300.0	323.8	301.8	302.4	304.7
PLUME	0.000E+00	8.631E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	7.010E-05	9.650E-02	1.166E-03	3.219E-03	-1.681E-03
	-2.017E-05	4.241E-01	1.984E-02	2.698E-02	5.102E-02
QSCW	2.420E-06	1.001E+00	4.947E-02	6.287E-02	1.044E-01
	5.670E-05	-5.534E-02	-3.159E-04	2.193E-05	-4.279E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	1.747E+05	1.986E+05	1.972E+05	1.958E+05
CO2	PPM	/	0.000E+00	2.133E+04	5.565E+03	6.517E+03	7.391E+03
CO	PPM	/	0.000E+00	419.	109.	128.	145.
OD	1/M	/	0.000E+00	1.07	0.416	0.482	0.527
CT	GM/M3	/	0.000E+00	69.6	32.1	37.6	46.4

TIME = 600.0 SECONDS.

U. TEMP	300.0	492.2	312.0	314.7	323.8
L. TEMP	300.7	333.6	302.2	303.8	304.6
UL. VOLUM	0.0	25.8	86.1	24.6	62.8
UL. THICK	0.0	2.4	2.4	2.4	2.3
CE. TEMP	300.0	371.6	304.2	305.5	311.2
UW. TEMP	300.0	353.6	303.0	304.0	308.1
LW. TEMP	300.0	323.3	301.2	301.7	303.3
FL. TEMP	300.0	337.0	302.1	302.7	305.4
PLUME	0.000E+00	2.479E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	1.221E-04	1.389E-01	6.027E-04	2.127E-03	-2.797E-03
	-3.528E-05	5.739E-01	1.802E-02	2.384E-02	4.508E-02
QSCW	4.765E-06	1.117E+00	3.835E-02	4.685E-02	7.045E-02
	8.090E-05	-1.119E-02	1.250E-05	1.646E-04	-1.851E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.604E+05	1.980E+05	1.964E+05	1.949E+05
CO2 PPM	0.000E+00	3.085E+04	5.990E+03	7.039E+03	7.978E+03
CO PPM	0.000E+00	606.	118.	138.	157.
OD 1/M	0.000E+00	1.47	0.450	0.524	0.577
CT GM/M3	0.000E+00	89.4	42.4	49.6	59.5

TIME = 700.0 SECONDS.

U. TEMP	300.0	509.6	310.3	312.4	320.5
L. TEMP	300.6	338.2	302.7	303.5	305.5
UL. VOLUM	0.0	25.7	86.8	24.6	63.7
UL. THICK	0.0	2.4	2.4	2.4	2.4
CE. TEMP	300.0	384.7	304.1	305.4	310.8
UW. TEMP	300.0	364.1	303.0	303.9	307.9
LW. TEMP	300.0	331.4	301.3	301.8	303.5
FL. TEMP	300.0	349.6	302.3	303.0	305.8
PLUME	0.000E+00	2.542E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	1.542E-04	1.610E-01	3.173E-05	1.132E-03	-3.227E-03
QSCW	-4.465E-05	6.520E-01	1.570E-02	2.026E-02	3.897E-02
	6.327E-06	1.141E+00	2.820E-02	3.286E-02	5.021E-02
	7.797E-05	-5.839E-02	5.087E-05	7.208E-05	-4.305E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.415E+05	1.974E+05	1.957E+05	1.940E+05
CO2 PPM	0.000E+00	4.336E+04	6.338E+03	7.473E+03	8.595E+03
CO PPM	0.000E+00	852.	124.	147.	169.
OD 1/M	0.000E+00	1.99	0.478	0.560	0.628
CT GM/M3	0.000E+00	141.	53.4	62.5	73.8

TIME = 800.0 SECONDS.

U. TEMP	300.4	519.6	309.2	311.1	318.9
L. TEMP	300.6	354.9	302.9	303.1	306.1
UL. VOLUM	10.4	25.9	87.2	24.6	64.3
UL. THICK	0.8	2.4	2.4	2.4	2.4
CE. TEMP	300.0	395.4	304.1	305.3	310.7
UW. TEMP	300.0	372.8	302.9	303.9	307.8
LW. TEMP	300.0	339.5	301.4	301.9	303.8
FL. TEMP	300.0	362.3	302.4	303.1	306.2
PLUME	0.000E+00	1.212E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.000E-03	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	6.000E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.621E-04	1.739E-01	-2.815E-04	6.643E-04	-3.287E-03
QSCW	6.010E-05	6.937E-01	1.393E-02	1.794E-02	3.522E-02
	6.993E-04	1.116E+00	2.182E-02	2.558E-02	4.023E-02
	7.686E-05	-2.270E-02	5.362E-05	7.006E-07	-5.726E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.073E+05	1.242E+05	1.969E+05	1.956E+05	1.928E+05
CO2	PPM	21.9	5.483E+04	6.719E+03	8.019E+03	9.405E+03
CO	PPM	0.430	1.077E+03	132.	158.	185.
OD	1/M	1.707E-03	2.47	0.509	0.604	0.691
CT	GM/M3	7.225E-02	194.	65.2	76.3	89.6



TIME = 900.0 SECONDS.

U. TEMP	300.3	468.3	308.3	310.2	317.0
L. TEMP	300.6	339.7	302.9	303.9	304.8
UL. VOLUM	15.0	25.5	86.5	24.4	63.9
UL. THICK	1.1	2.4	2.4	2.4	2.4
CE. TEMP	300.0	398.7	304.1	305.3	310.5
UW. TEMP	300.0	375.9	302.9	303.8	307.7
LW. TEMP	300.1	344.2	301.5	302.0	303.9
FL. TEMP	300.0	367.2	302.5	303.2	306.3
PLUME	0.000E+00	9.078E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-04	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	8.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.082E-04	3.444E-02	-5.572E-04	2.712E-04	-3.947E-03
QSCW	5.082E-05	5.066E-01	1.234E-02	1.587E-02	3.145E-02
	5.151E-04	5.419E-01	1.721E-02	2.037E-02	2.924E-02
	6.964E-05	-1.900E-01	3.698E-05	7.412E-05	-4.485E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	1.190E+05	1.964E+05	1.946E+05	1.924E+05
CO2 PPM	31.1	5.835E+04	7.102E+03	8.567E+03	1.008E+04
CO PPM	0.610	1.146E+03	140.	168.	198.
OD 1/M	2.422E-03	2.92	0.539	0.647	0.745
CT GM/M3	0.125	259.	77.7	91.2	107.



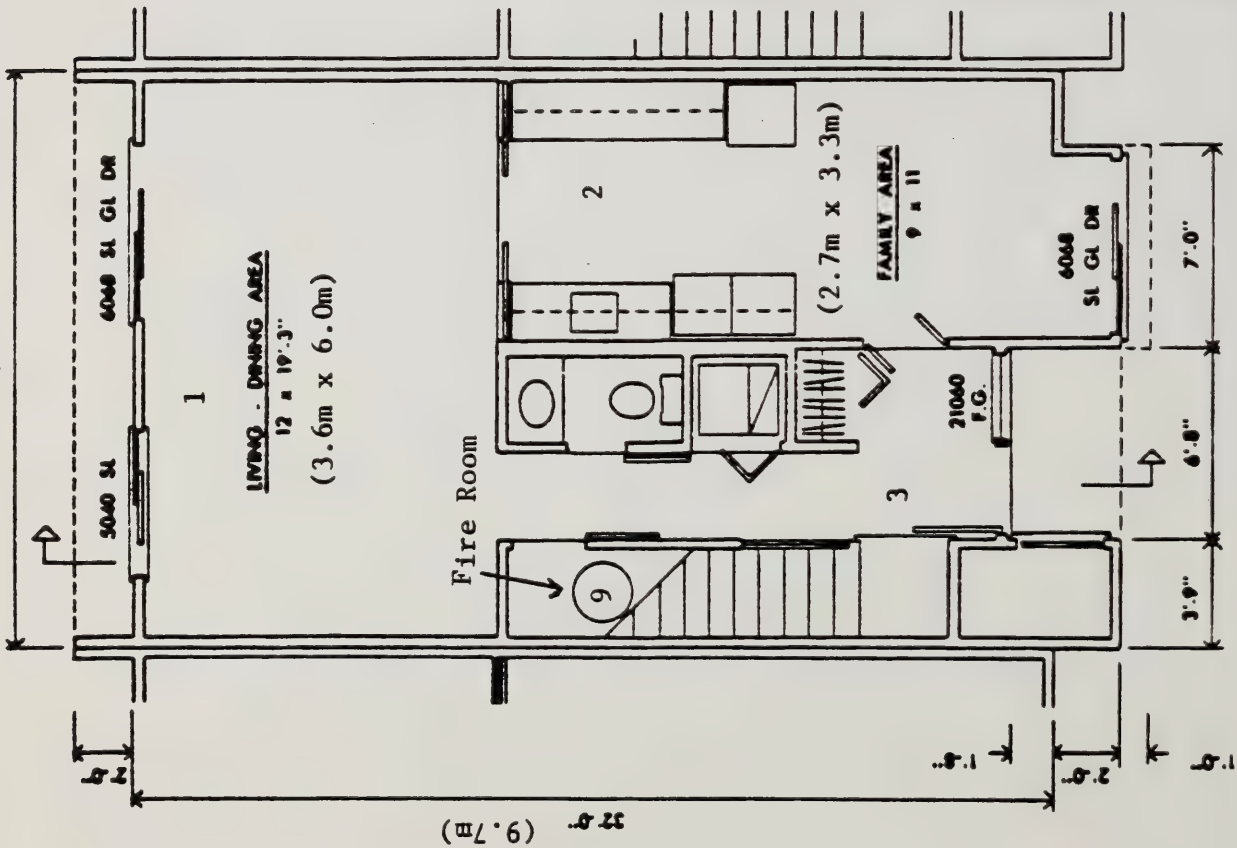
FIRE #4

HOUSEHOLD CLEANING MATERIALS

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)

(6.1m)

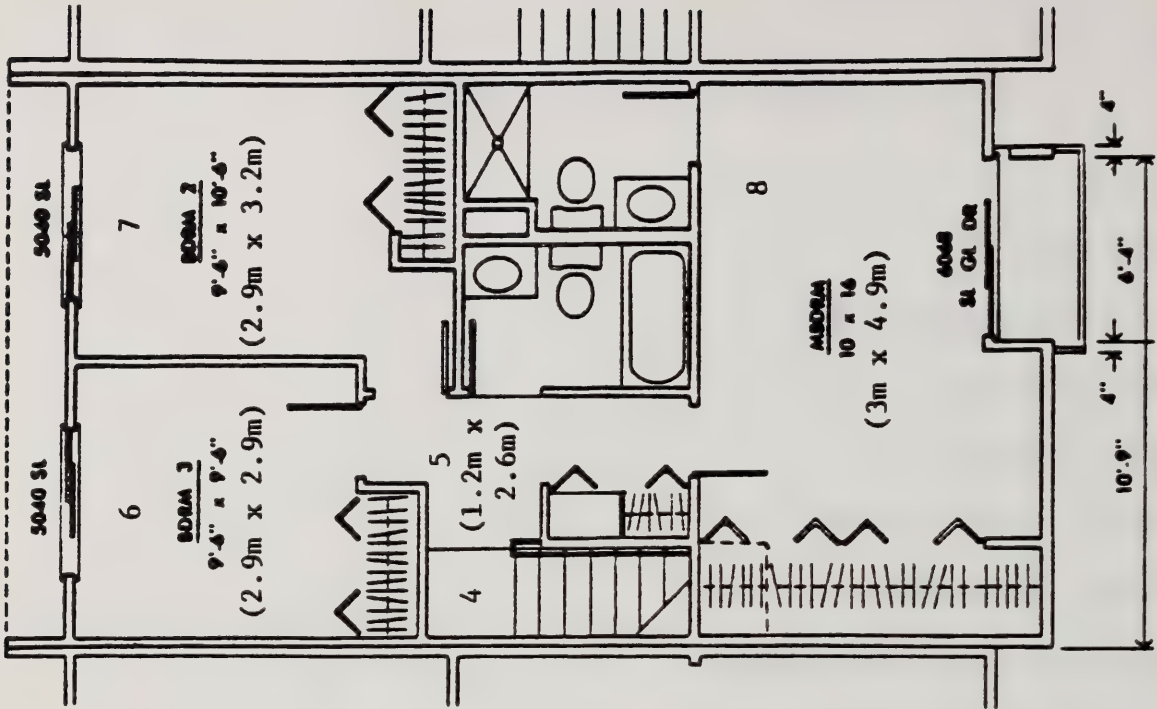
20'-0"



### LOWER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

NBS



### UPPER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

NBS

## B. FUEL LOAD BACKGROUND FOR FIRE #4

### FIRE #4 - CLOSET FIRE

BUILDING: Townhouse

OCCUPANTS: Mother aged 30, asleep watching TV in living room-  
fully capable.

Infant asleep in bedroom 3.

Boy aged 2 asleep in bedroom 2.

DOORS: All doors open except door to closet under stairs.

FIRE: Storage area under stairs - fire caused by electric arc  
from hot water heater - household cleaning materials  
burn.

FUEL: Material Code: TRB001

Material ID: Trash Bags, Paper

Mass was reduced due to the limited availability of  
oxygen. The door to Fire Room (closet) was closed.

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Closet under the stairs

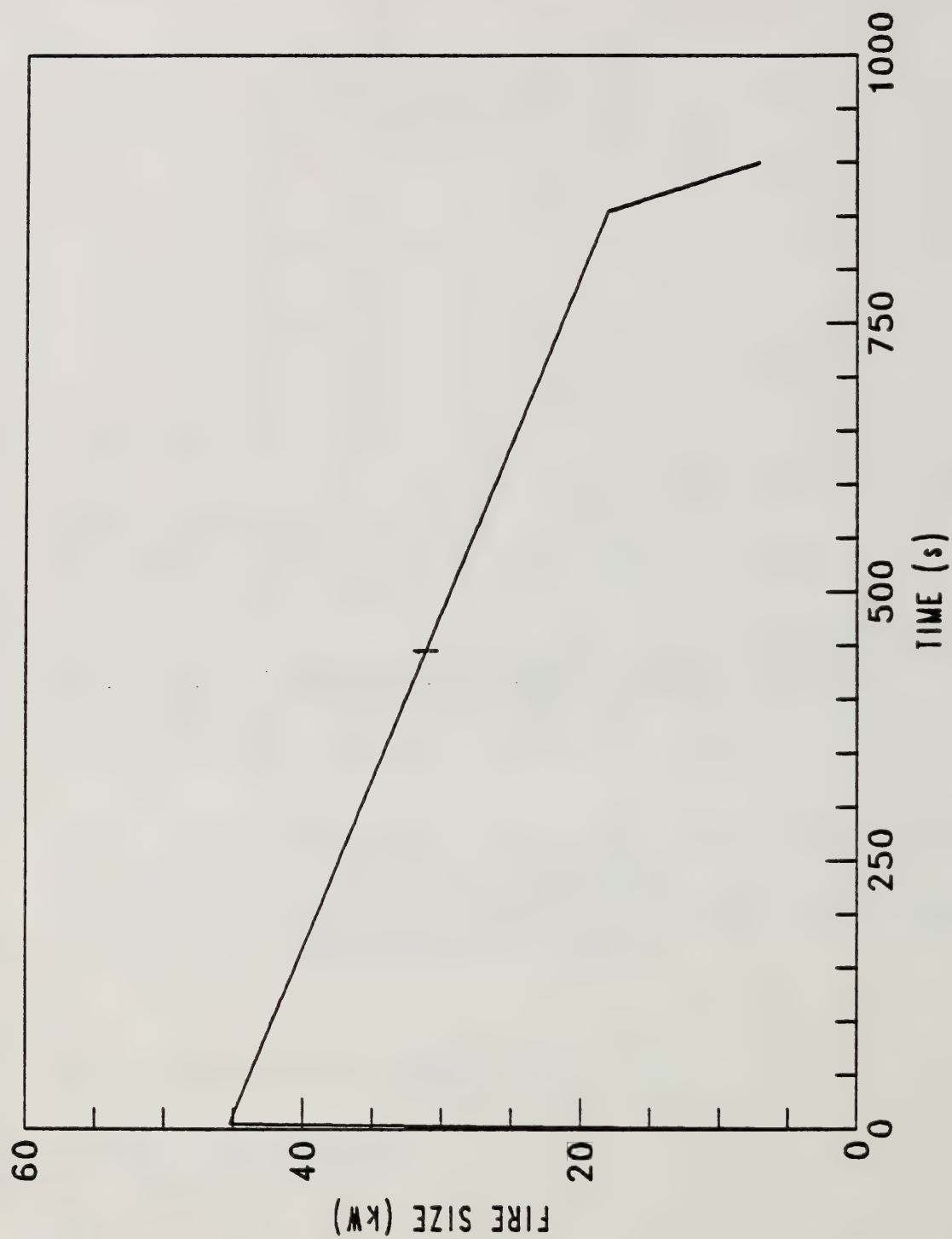
FLASHOVER

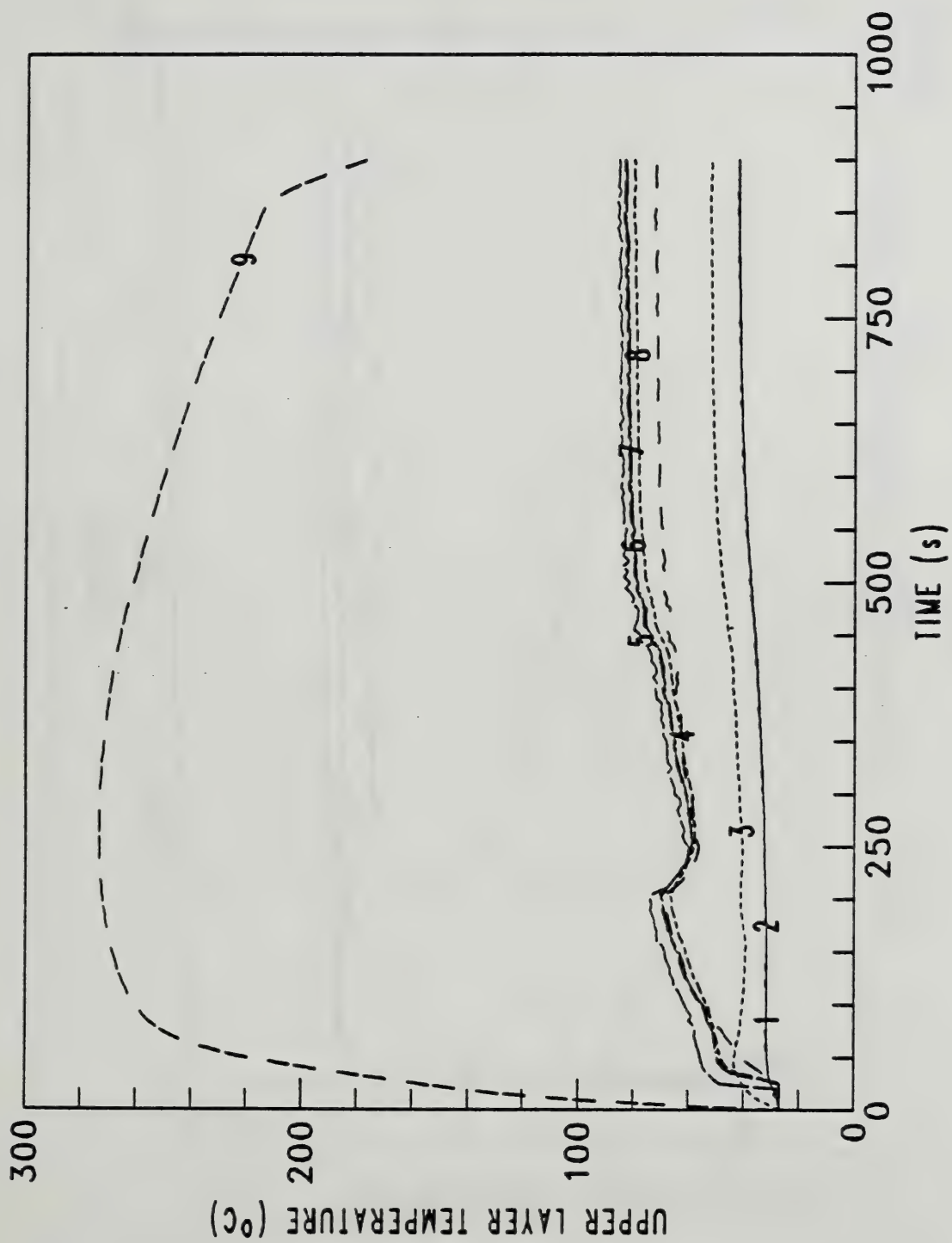
TIME: No flashover

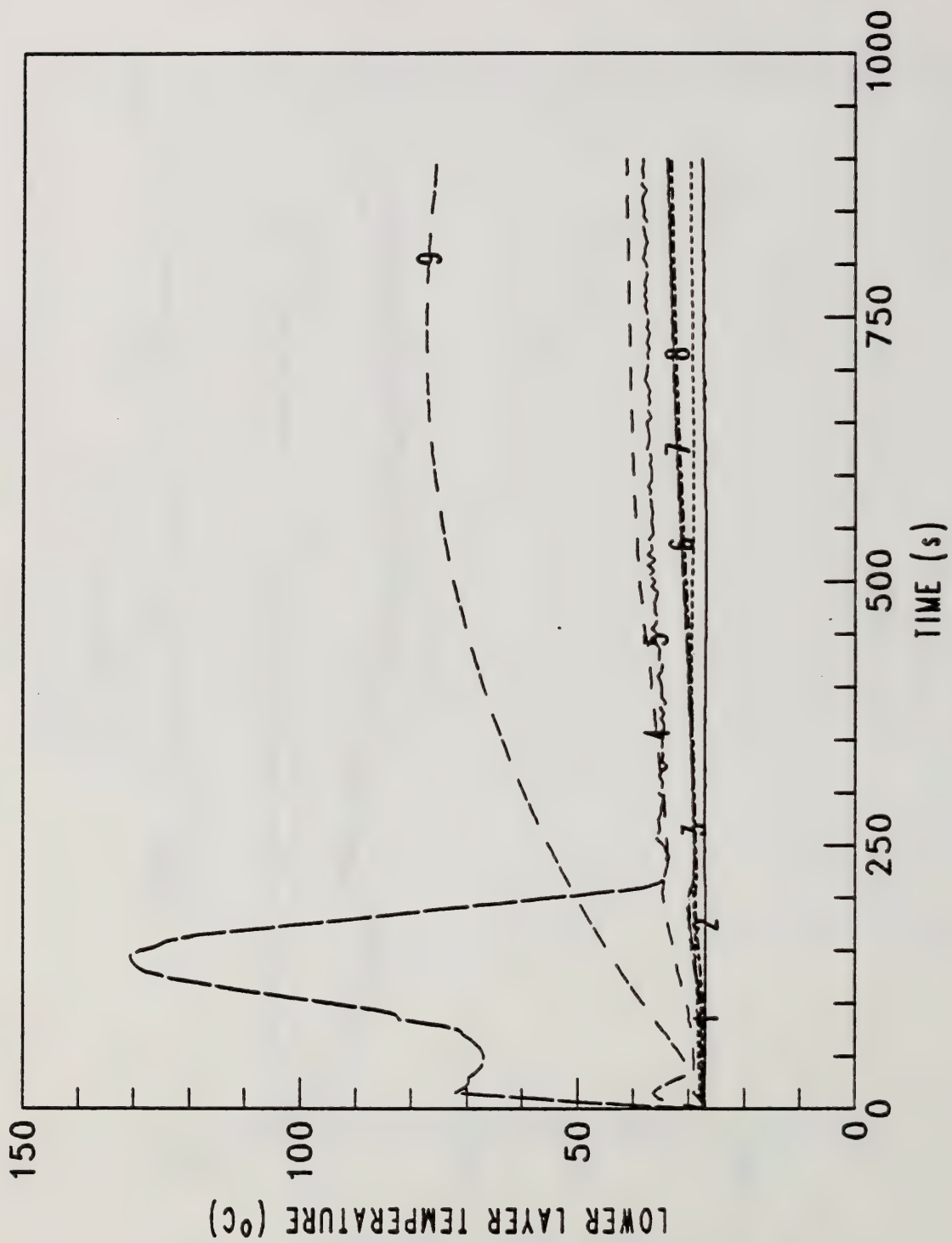


VERSN 017 TOWN HOUSE CLOSET  
 TIMES 900 100 0 0 0 .1  
 NROOM 9  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 0.0 0.0 0.0 2.7 2.7 2.7 2.7 0.0  
 WIDTH 6.0 2.7 2.1 1.2 1.5 2.9 2.9 4.9 1.2  
 DEPTH 3.6 6.9 5.2 3.0 2.6 2.9 3.2 3.0 2.1  
 HEIGH 2.4 2.4 2.4 4.9 2.4 2.4 2.4 2.4 2.4  
 HVENT 1 2 1.1 2.1 0.0  
 HVENT 1 3 1.1 2.1 0.0  
 HVENT 3 9 1.10 .02 0.0  
 HVENT 2 3 1.1 2.1 0.  
 HVENT 3 4 1.1 2.1 0.0  
 HVENT 4 5 1.1 4.8 2.7  
 HVENT 5 6 1.1 2.1 0.0  
 HVENT 5 7 1.1 2.1 0.0  
 HVENT 5 8 1.1 2.1 0.0  
 HVENT 2 10 1.1 0.2 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .0002  
 SPHT .9 .9 .9 .9 .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
 LFBO 9  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 16000 300  
 LFMAX 3  
 FTIME 5 845 45  
 FMASS .0 .001 .0010 .00040  
 FHIGH 0.0 0.0 0.0 0.0  
 CO .03 .03 .03 .03  
 O2 -1.2 -1.2 -1.2 -1.2  
 CO2 1.6 1.6 1.6 1.6  
 OD .02 .02 .02 .02  
 CT 1. 1. 1. 1.

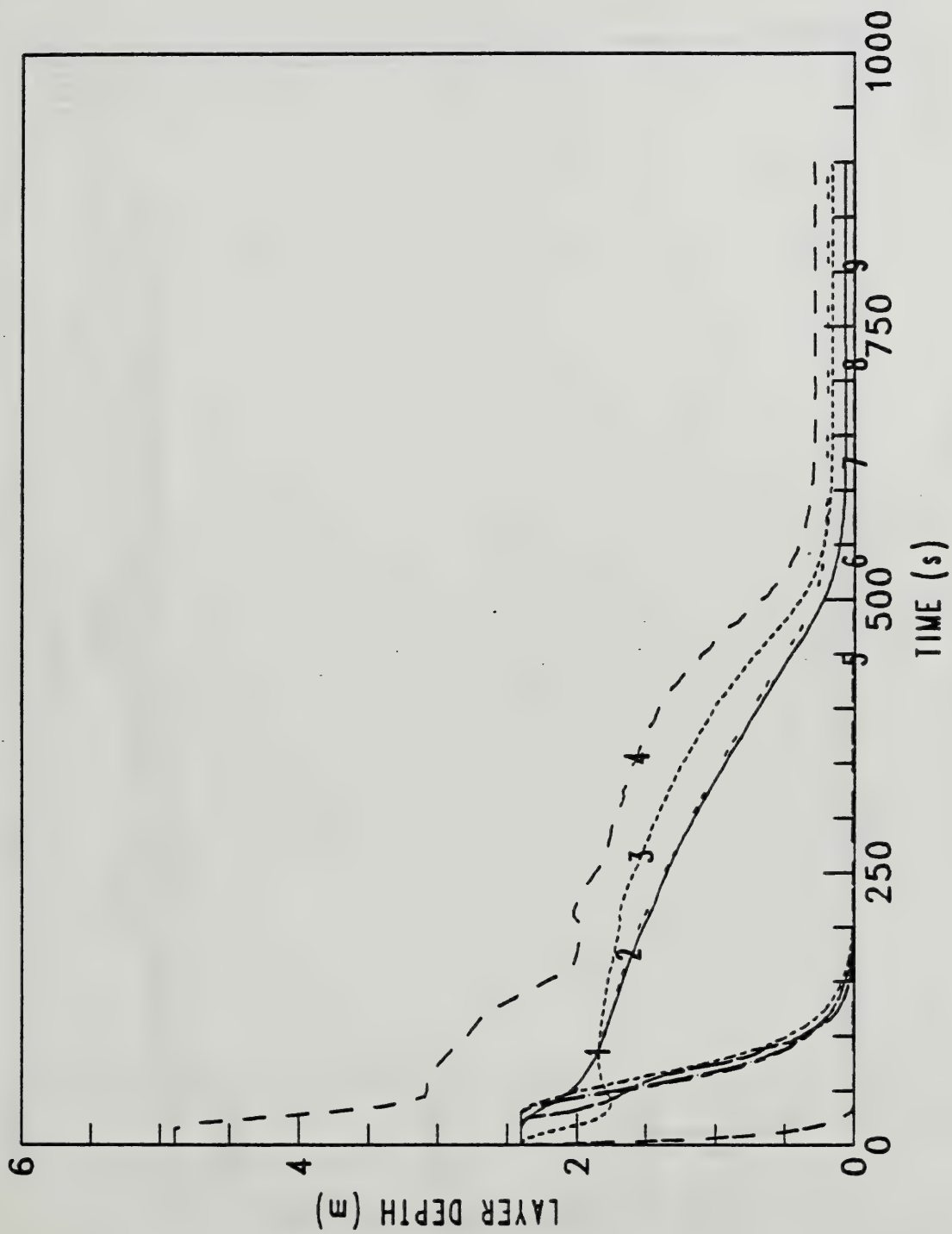
D. . OUTPUT - GRAPHS FOR FIRE #4

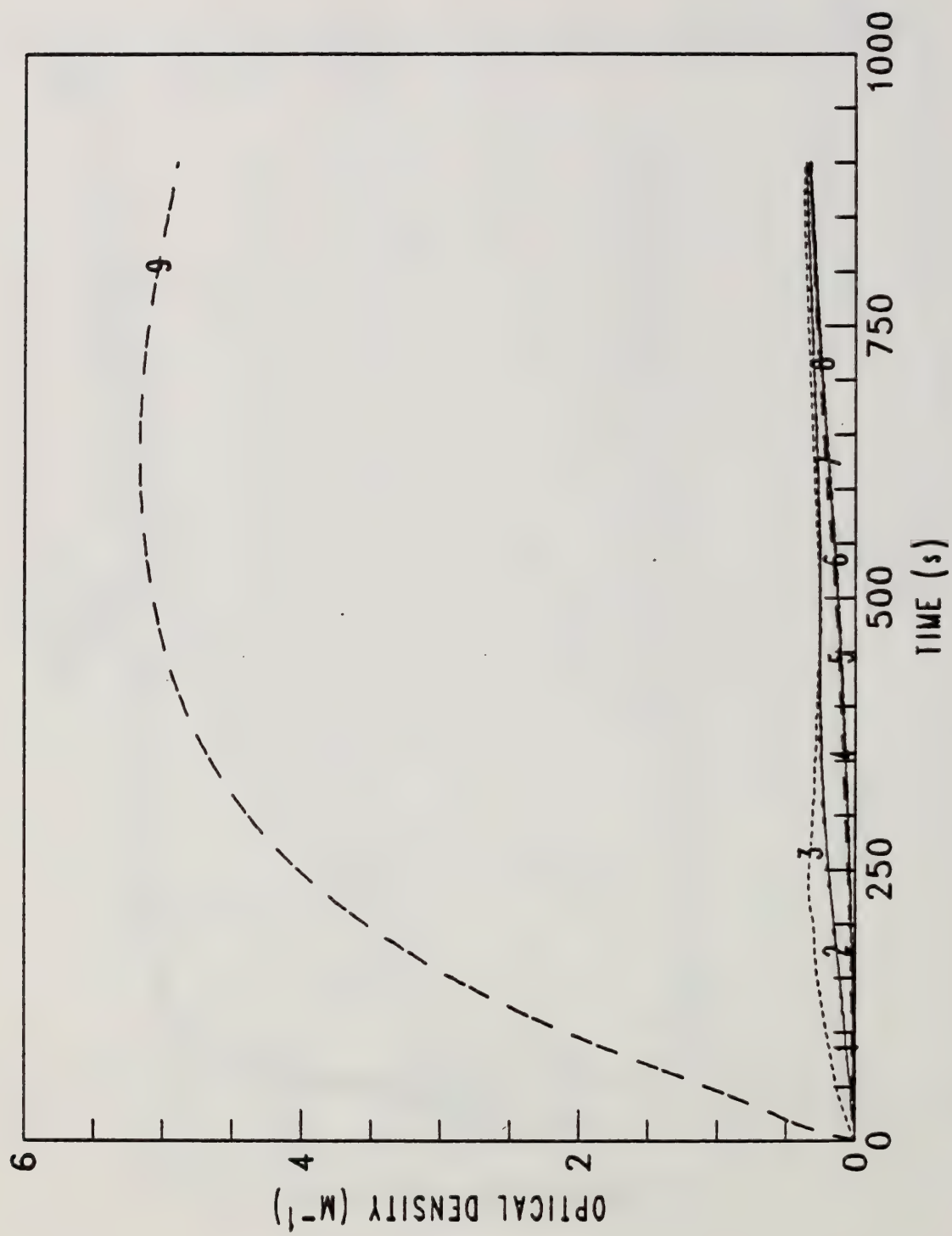


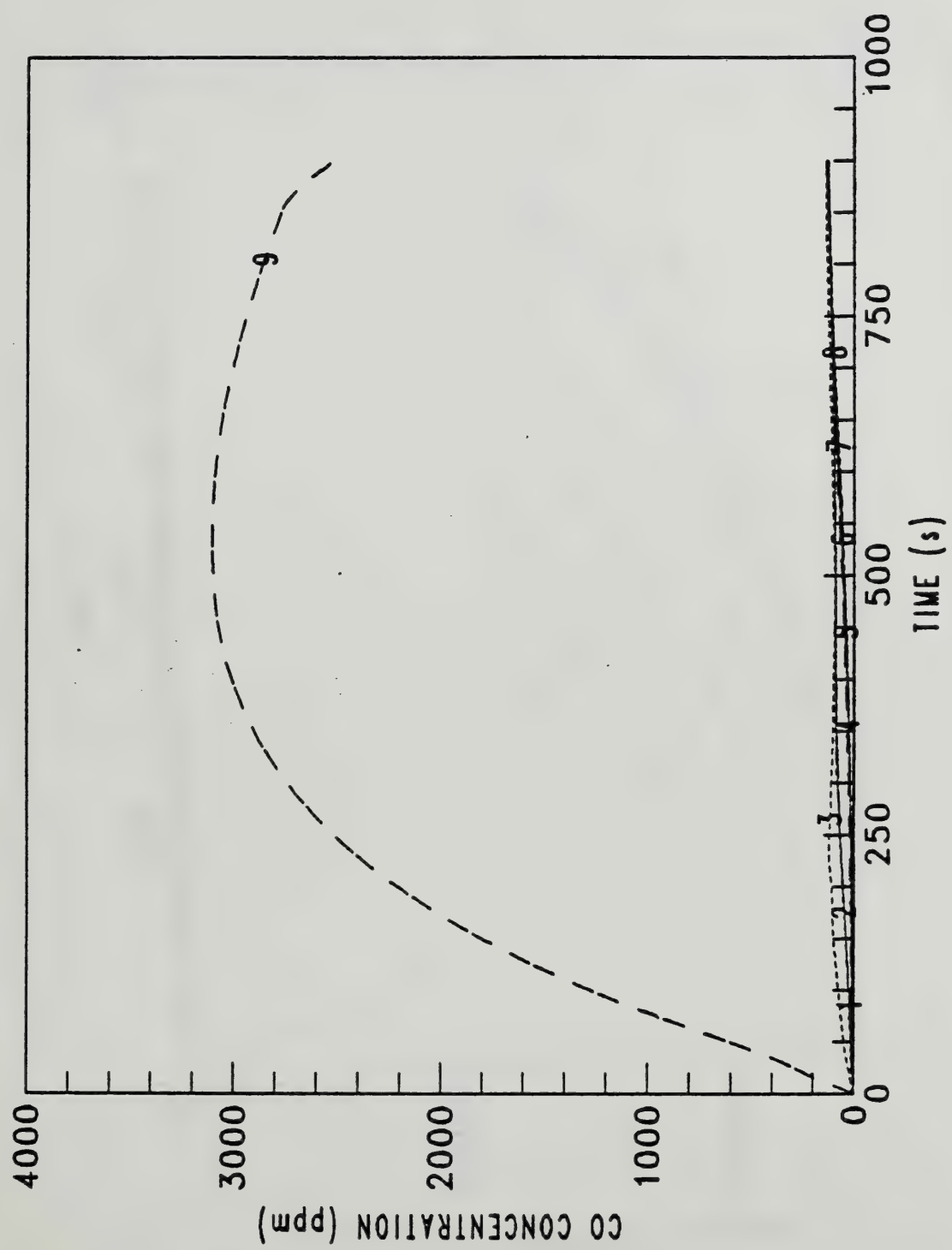


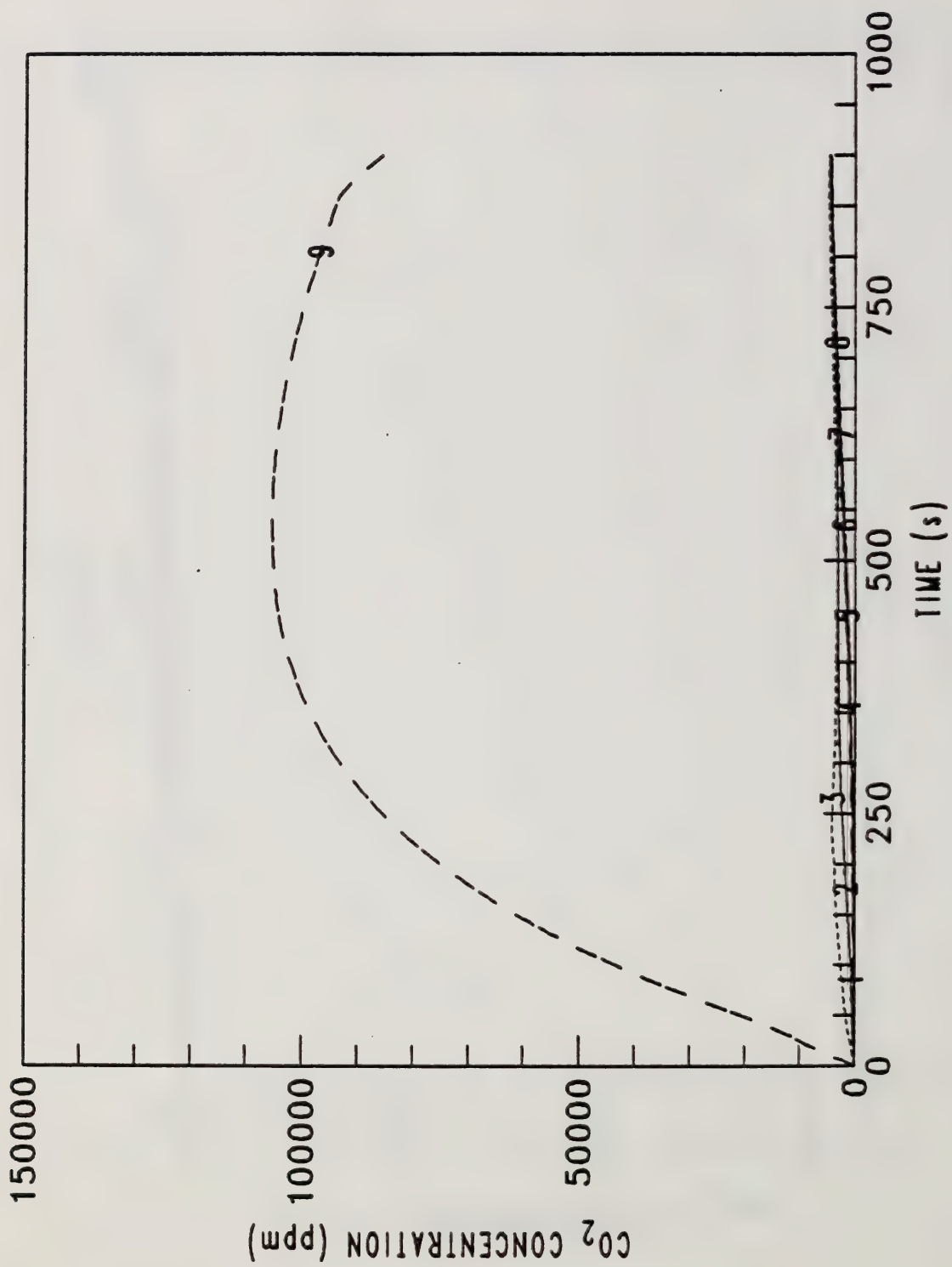


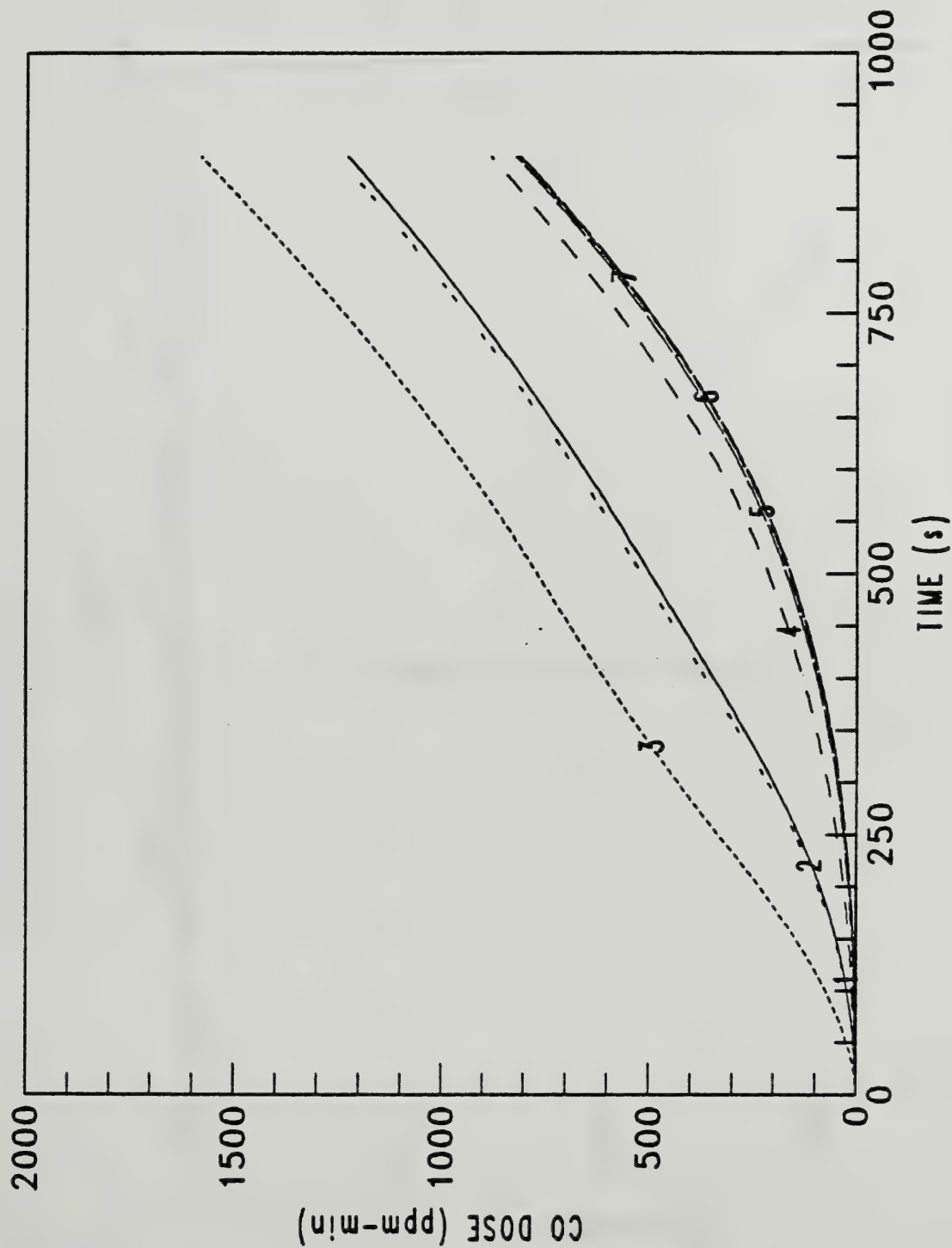




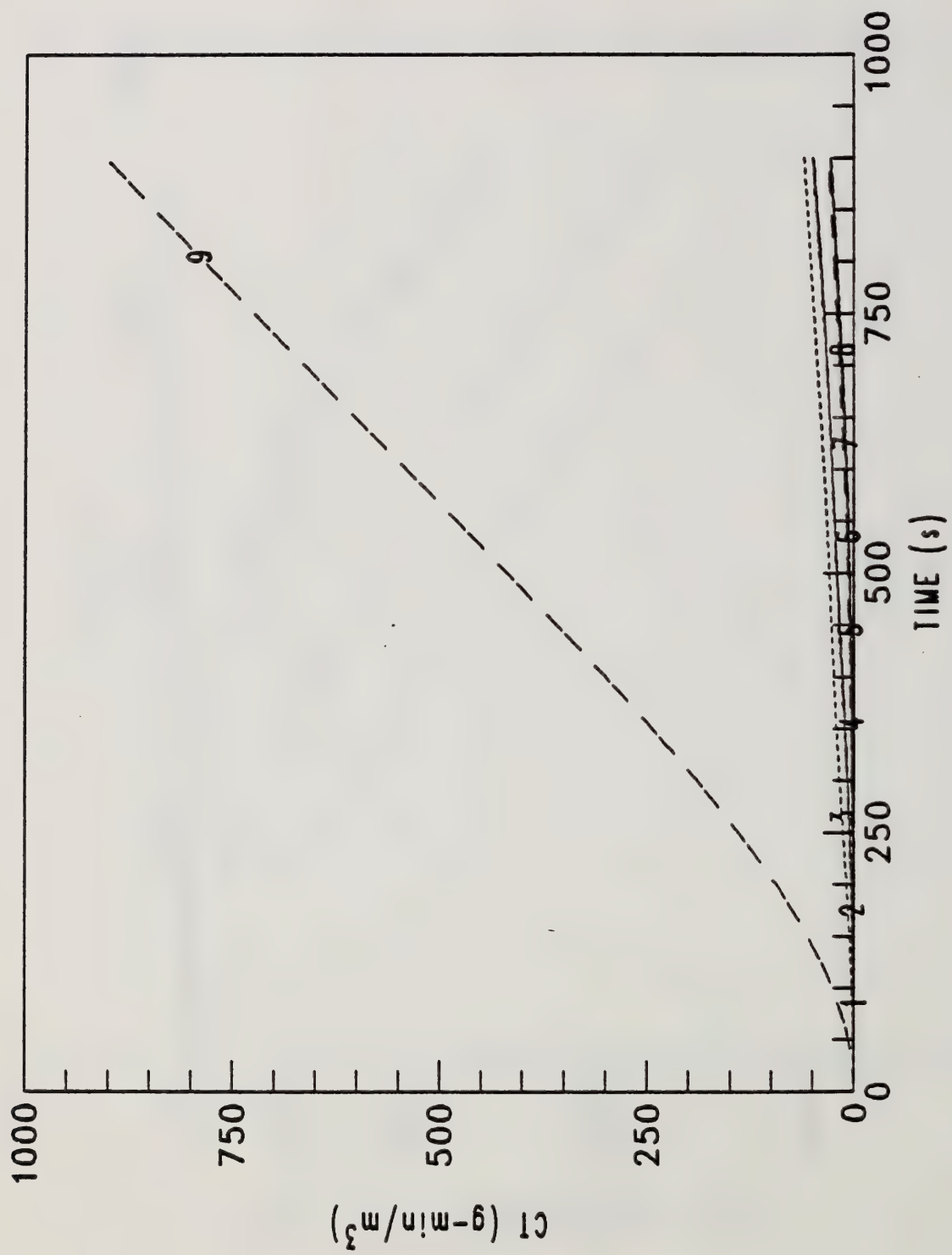












E. OUTPUT COMPUTER FILES FOR FIRE #4

## TOWN HOUSE CLOSET

TOTAL COMPARTMENTS = 9  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	6.0	2.7	2.1	1.2	1.5	2.9	2.9	4.9	1.2
DEPTH	3.6	6.9	5.2	3.0	2.6	2.9	3.2	3.0	2.1
HEIGHT	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4	2.4
AREA	21.6	18.6	10.9	3.6	3.9	8.4	9.3	14.7	2.5
VOLUME	51.8	44.7	26.2	17.6	9.4	20.2	22.3	35.3	6.0
CEILING	2.4	2.4	2.4	4.9	5.1	5.1	5.1	5.1	2.4
FLOOR	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	1.10	0.00	0.00	0.00	0.00	1.10	0.00	0.00
	HH=	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	1.10	0.00	1.10	0.00	0.00	0.00	1.10	0.00	0.00
	HH=	2.10	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	1.10	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	2.10	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.00	0.00	0.00	1.10	0.00	1.10	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	4.80	0.00	2.10	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	4.80	0.00	4.80	4.80	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	2.70	2.70	0.00	0.00	0.00
6 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00
7 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00
8 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00

HH=	0.00	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00

9 ( 1)

# CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	2.000E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

# FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02
THICK=	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02	1.270E-02
EMISS=	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00	1.000E+00

# UPPER WALL

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

# LOWER WALL

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

FIRE ROOM NUMBER IS 9

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 3

TOTAL TIME INTERVAL = 900

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 16000.

FMASS=	0.00E+00	1.00E-03	1.00E-03	4.00E-04
FHIGH=	0.00E+00	0.00E+00	0.00E+00	0.00E+00
O2=	-1.2	-1.2	-1.2	-1.2
CO2=	1.6	1.6	1.6	1.6
CO=	3.00E-02	3.00E-02	3.00E-02	3.00E-02
OD=	2.00E-02	2.00E-02	2.00E-02	2.00E-02

CT=	1.0	1.0	1.0	1.0
FTIME=	5.0	8.45E+02	45.	





TIME = 100.0 SECONDS.

U. TEMP	300.1	300.2	302.6	300.1	300.0	300.0	300.0	300.0	414.4
L. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	316.5
UL. VOLUM	6.1	7.0	17.2	10.9	0.0	0.0	0.0	0.0	6.0
UL. THICK	0.3	0.4	1.6	3.0	0.0	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	320.1
UW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	314.6
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	305.1
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	306.8
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.092E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	6.165E-05	7.944E-05	1.189E-03	4.617E-05	4.603E-06	-8.091E-07	-8.101E-07	-8.134E-07	9.352E-02
QSCW	3.529E-05	4.556E-05	1.170E-03	1.098E-05	1.305E-06	1.879E-07	1.951E-07	2.274E-07	2.077E-01
	1.656E-04	2.395E-04	8.092E-03	8.508E-05	5.552E-06	-5.331E-10	-5.341E-10	-5.371E-10	9.041E-01
	-1.889E-07	-3.063E-07	4.651E-06	-2.523E-08	-8.421E-06	-9.840E-06	-9.871E-06	-9.987E-06	2.933E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	2.069E+05	2.065E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	1.842E+05
CO2 PPM	31.0	41.3	427.	13.9	8.03	0.000E+00	0.000E+00	0.000E+00	1.627E+04
CO PPM	0.914	1.22	12.6	0.409	0.237	0.000E+00	0.000E+00	0.000E+00	538.
OO 1/M	2.421E-03	3.221E-03	3.303E-02	1.084E-03	6.269E-04	0.000E+00	0.000E+00	0.000E+00	1.03
CT GM/M3	2.724E-02	4.012E-02	0.357	5.430E-03	2.904E-03	0.000E+00	0.000E+00	0.000E+00	12.8

**TIME = 200.0 SECONDS.**

[illegible]

## UPPER LAYER SPECIES CONCENTRATION

	2.069E+05	2.069E+05	2.061E+05	2.069E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2 PPM /	74.8	92.4	686.	91.4	48.4	0.000E+00	0.000E+00	0.000E+00	1.590E+05
CO2 PPM /						0.000E+00	0.000E+00	0.000E+00	3.847E+04
CO PPM /	2.20	2.72	20.2	2.69	1.42	0.000E+00	0.000E+00	0.000E+00	1.133E+03
OD 1/M /	5.831E-03	7.208E-03	5.311E-02	7.123E-03	3.773E-03	0.000E+00	0.000E+00	0.000E+00	2.08
CT GM/M3 /	0.123	0.161	1.40	0.104	5.813E-02	0.000E+00	0.000E+00	0.000E+00	49.9



TIME = 300.0 SECONDS.

U. TEMP	300.3	300.3	302.2	300.4	300.1	300.0	300.0	300.0	443.3
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	325.3
UL. VOLUM	20.8	19.4	19.1	14.9	0.5	0.0	0.0	0.0	6.0
UL. THICK	1.0	1.0	1.8	4.1	0.1	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.3	300.0	300.0	300.0	300.0	300.0	345.0
UW. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	334.3
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	314.6
FL. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	322.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.153E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	1.136E-04	1.352E-04	7.078E-04	1.952E-04	3.750E-05	-1.172E-06	-1.177E-06	-1.195E-06	1.123E-01
	1.098E-04	1.293E-04	1.420E-03	1.297E-04	1.489E-05	2.729E-07	2.842E-07	3.347E-07	3.343E-01
QSCW	4.214E-04	5.304E-04	5.618E-03	6.092E-04	1.093E-04	-8.490E-10	-8.563E-10	-8.818E-10	9.097E-01
	-2.694E-06	-3.414E-06	-5.842E-05	-3.121E-06	-7.052E-06	-8.019E-06	-8.089E-06	-8.354E-06	4.409E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.068E+05	2.068E+05	2.058E+05	2.068E+05	2.066E+05	2.070E+05	2.070E+05	1.335E+05
CO2	PPM	129.	154.	949.	153.	94.9	0.000E+00	0.000E+00	5.896E+04
CO	PPM	3.79	4.55	28.0	4.51	2.80	0.000E+00	0.000E+00	1.737E+03
OD	1/M	1.004E-02	1.203E-02	7.352E-02	1.194E-02	7.405E-03	0.000E+00	0.000E+00	3.11
CT	GM/M3	0.311	0.390	2.90	0.332	0.191	0.000E+00	0.000E+00	112.

TIME = 400.0 SECONDS.

U. TEMP	300.3	300.3	302.0	300.4	300.1	300.0	300.0	300.0	450.9
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	332.3
UL. VOLUM	23.5	21.5	19.4	15.1	1.2	0.0	0.0	0.0	6.0
UL. THICK	1.1	1.2	1.8	4.2	0.3	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.4	300.0	300.0	300.0	300.0	300.0	353.5
UW. TEMP	300.0	300.0	300.3	300.0	300.0	300.0	300.0	300.0	341.2
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	319.1
FL. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	330.2
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.104E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	1.131E-04	1.316E-04	6.021E-04	1.832E-04	4.549E-05	-1.247E-06	-1.255E-06	-1.284E-06	1.164E-01
	1.278E-04	1.478E-04	1.408E-03	1.432E-04	2.233E-05	2.932E-07	3.057E-07	3.611E-07	3.659E-01
QSCW	4.435E-04	5.432E-04	4.944E-03	5.702E-04	1.464E-04	-8.289E-10	-8.521E-10	-9.279E-10	8.874E-01
	-4.282E-06	-5.276E-06	-9.656E-05	-5.055E-06	-6.812E-06	-7.240E-06	-7.323E-06	-7.645E-06	3.825E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.068E+05	2.067E+05	2.054E+05	2.067E+05	2.068E+05	2.070E+05	2.070E+05	2.070E+05	1.079E+05
CO2 PPM	193.	228.	1.268E+03	221.	145.	4.70	4.28	2.74	7.942E+04
CO PPM	5.68	6.71	37.4	6.52	4.28	0.139	0.126	8.083E-02	2.340E+03
OD 1/M	1.503E-02	1.777E-02	9.830E-02	1.725E-02	1.134E-02	3.670E-04	3.336E-04	2.141E-04	4.12
CT GM/M3	0.607	0.743	4.94	0.675	0.424	9.608E-04	8.721E-04	5.565E-04	198.



TIME = 500.0 SECONDS.

U. TEMP	300.3	300.4	302.0	300.4	300.1	300.0	300.0	300.0	457.6
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	339.4
UL. VOLUM	25.8	23.6	19.5	15.6	1.6	0.0	0.0	0.0	6.0
UL. THICK	1.2	1.3	1.8	4.3	0.4	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.4	300.0	300.0	300.0	300.0	300.0	361.2
UW. TEMP	300.0	300.0	300.3	300.0	300.0	300.0	300.0	300.0	347.5
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	323.7
FL. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	337.3
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.090E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	1.124E-04	1.262E-04	5.315E-04	1.789E-04	3.049E-04	-1.015E-06	-1.051E-06	-1.183E-06	1.202E-01
	1.434E-04	1.623E-04	1.403E-03	1.697E-04	1.940E-05	3.960E-07	4.042E-07	4.418E-07	3.926E-01
QSCW	4.579E-04	5.350E-04	4.540E-03	5.570E-04	9.969E-05	8.213E-08	6.889E-08	2.663E-08	8.654E-01
	-5.936E-06	-7.103E-06	-1.252E-04	-7.332E-06	-6.225E-06	-6.574E-06	-6.666E-06	-7.024E-06	3.833E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.067E+05	2.066E+05	2.050E+05	2.066E+05	2.068E+05	2.069E+05	2.069E+05	2.069E+05	8.256E+04
CO2	PPM	274.	316.	1.616E+03	318.	171.	79.5	75.4	57.1	9.977E+04
CO	PPM	8.07	9.31	47.6	9.37	5.05	2.34	2.22	1.68	2.940E+03
OD	1/M	2.135E-02	2.464E-02	0.125	2.479E-02	1.336E-02	6.204E-03	5.884E-03	4.457E-03	5.11
CT	GM/M3	1.04	1.25	7.60	1.17	0.714	6.607E-02	6.156E-02	4.335E-02	308.

TIME = 600.0 SECONDS.

U. TEMP	300.3	300.3	301.9	300.3	300.1	300.0	300.0	300.0	463.9
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	346.4
UL. VOLUM	27.6	25.4	19.9	16.0	1.8	0.0	0.0	0.0	6.0
UL. THICK	1.3	1.4	1.8	4.4	0.5	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.4	300.0	300.0	300.0	300.0	300.0	368.5
UW. TEMP	300.0	300.0	300.3	300.0	300.0	300.0	300.0	300.0	353.4
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	328.4
FL. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	344.2
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.076E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	1.062E-04	1.168E-04	5.001E-04	1.655E-04	2.333E-05	-9.962E-07	-1.036E-06	-1.180E-06	1.236E-01
	1.520E-04	1.699E-04	1.453E-03	1.846E-04	1.808E-05	4.351E-07	4.435E-07	4.831E-07	4.172E-01
QSCW	4.434E-04	5.026E-04	4.383E-03	5.071E-04	7.775E-05	1.212E-07	1.047E-07	5.127E-08	8.439E-01
	-7.532E-06	-8.811E-06	-1.468E-04	-9.799E-06	-5.704E-06	-5.981E-06	-6.079E-06	-6.464E-06	3.820E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.066E+05	2.065E+05	2.045E+05	2.065E+05	2.068E+05	2.068E+05	2.068E+05	2.069E+05	5.737E+04
CO2	PPM	359.	407.	2.018E+03	417.	202.	138.	135.	117.	1.200E+05
CO	PPM	10.6	12.0	59.5	12.3	5.96	4.08	3.98	3.45	3.535E+03
OD	1/M	2.796E-02	3.176E-02	0.157	3.249E-02	1.578E-02	1.081E-02	1.054E-02	9.131E-03	6.06
CT	GM/M3	1.63	1.92	10.9	1.86	1.06	0.275	0.264	0.210	441.

TIME = 700.0 SECONDS.

U. TEMP	300.3	300.3	302.0	300.3	300.1	300.0	300.0	300.0	300.0	469.9
L. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	353.1
UL. VOLUM	29.3	26.9	20.1	16.3	2.1	0.0	0.0	0.0	0.0	6.0
UL. THICK	1.4	1.4	1.8	4.5	0.5	0.0	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.0	300.5	300.1	300.0	300.0	300.0	300.0	300.0	375.6
UW. TEMP	300.0	300.0	300.3	300.0	300.0	300.0	300.0	300.0	300.0	359.1
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	333.1
FL. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	300.0	351.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.061E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
OF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	1.023E-04	1.104E-04	4.808E-04	1.573E-04	1.892E-05	-9.807E-07	-1.029E-06	-1.207E-06	-1.207E-06	1.269E-01
	1.601E-04	1.771E-04	1.510E-03	1.994E-04	1.717E-05	4.620E-07	4.693E-07	5.032E-07	4.408E-01	4.408E-01
QSCW	4.339E-04	4.785E-04	4.350E-03	4.767E-04	6.403E-05	1.505E-07	1.290E-07	5.840E-08	8.226E-01	8.226E-01
	-9.044E-06	-1.037E-05	-1.693E-04	-1.187E-05	-5.231E-06	-5.448E-06	-5.551E-06	-5.955E-06	-5.955E-06	3.546E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.064E+05	2.064E+05	2.039E+05	2.063E+05	2.067E+05	2.068E+05	2.068E+05	2.068E+05	3.240E+04
CO2 PPM	457.	511.	2.464E+03	534.	236.	173.	171.	157.	1.400E+05
CO PPM	13.5	15.1	72.6	15.7	8.96	5.10	5.03	4.62	4.125E+03
OD 1/M	3.560E-02	3.985E-02	0.191	4.161E-02	1.844E-02	1.351E-02	1.332E-02	1.223E-02	6.98
CT GM/M3	2.38	2.77	15.1	2.74	1.47	0.568	0.551	0.468	597.



TIME = 800.0 SECONDS.

U. TEMP	300.3	300.3	302.0	300.3	300.1	300.0	300.0	300.0	300.0	475.7
L. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	359.7
UL. VOLUM	30.8	28.3	20.4	16.4	2.3	0.0	0.0	0.0	0.0	6.0
UL. THICK	1.4	1.5	1.9	4.6	0.6	0.0	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.1	300.5	300.1	300.0	300.0	300.0	300.0	300.0	382.5
UW. TEMP	300.0	300.0	300.4	300.0	300.0	300.0	300.0	300.0	300.0	364.5
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	338.0
FL. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	300.0	357.7
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.054E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.000E-03
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.600E+01
QSRW	9.850E-05	1.028E-04	4.656E-04	1.525E-04	1.795E-05	-9.780E-07	-1.031E-06	-1.220E-06	1.299E-01	1.299E-01
	1.673E-04	1.817E-04	1.582E-03	2.120E-04	1.735E-05	4.986E-07	5.040E-07	5.333E-07	4.640E-01	4.640E-01
QSCW	4.236E-04	4.486E-04	4.351E-03	4.590E-03	5.982E-05	1.874E-07	1.603E-07	7.533E-08	8.018E-01	8.018E-01
	-1.049E-05	-1.176E-05	-1.900E-04	-1.380E-05	-4.861E-06	-4.967E-06	-5.072E-06	-5.489E-06	3.176E-04	3.176E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.063E+05	2.062E+05	2.033E+05	2.062E+05	2.067E+05	2.067E+05	2.067E+05	2.067E+05	2.067E+05	7.662E+03
CO2 PPM	565.	618.	2.943E+03	670.	282.	215.	213.	203.	203.	1.598E+05
CO PPM	16.6	18.2	86.7	19.8	8.30	6.32	6.27	5.99	5.99	4.709E+03
OD 1/M	4.405E-02	4.820E-02	0.228	5.227E-02	2.198E-02	1.675E-02	1.661E-02	1.585E-02	1.585E-02	7.87
CT GM/M3	3.33	3.82	20.1	3.85	1.95	0.930	0.909	0.804	0.804	774.

THE FIRE BECAME VENTILATION CONTROLLED AT 832. SECONDS  
 CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
 SEE THE HAZARD 1 REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 900.0 SECONDS.

U. TEMP	300.3	300.3	301.7	300.3	300.1	300.0	300.0	300.0	300.0	442.7
L. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	331.7
UL. VOLUM	32.0	29.3	19.6	16.5	2.5	0.1	0.1	0.1	0.1	5.9
UL. THICK	1.5	1.6	1.8	4.6	0.6	0.0	0.0	0.0	0.0	2.4
CE. TEMP	300.0	300.1	300.5	300.1	300.0	300.0	300.0	300.0	300.0	384.9
UW. TEMP	300.0	300.0	300.4	300.0	300.0	300.0	300.0	300.0	300.0	366.4
LW. TEMP	300.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0	340.1
FL. TEMP	300.0	300.0	300.2	300.0	300.0	300.0	300.0	300.0	300.0	357.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.053E-03
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.000E-04
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.400E+00
QSRW	8.716E-05	8.907E-05	2.636E-04	1.400E-04	1.567E-05	-5.930E-07	-6.952E-07	-1.063E-06	-1.063E-06	5.157E-02
	1.665E-04	1.786E-04	1.396E-03	2.087E-04	1.710E-05	6.540E-07	6.468E-07	6.242E-07	6.242E-07	3.706E-01
QSCW	3.823E-04	3.941E-04	3.196E-03	4.140E-04	5.345E-05	4.927E-07	4.187E-07	1.851E-07	1.851E-07	4.386E-01
	-1.179E-05	-1.298E-05	-2.116E-04	-1.608E-05	-4.669E-06	-4.597E-06	-4.705E-06	-5.131E-06	-5.131E-06	-1.776E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.062E+05	2.061E+05	2.031E+05	2.060E+05	2.066E+05	2.067E+05	2.067E+05	2.067E+05	2.067E+05	4.844E+03
CO2	PPM	658.	710.	3.169E+03	801.	328.	255.	254.	245.	245.	1.672E+05
CO	PPM	19.4	20.9	93.4	23.6	9.67	7.52	7.48	7.23	7.23	4.928E+03
OD	1/M	5.134E-02	5.535E-02	0.246	6.243E-02	2.560E-02	1.992E-02	1.981E-02	1.914E-02	1.914E-02	8.85
CT	GM/M3	4.48	5.06	25.9	5.23	2.52	1.36	1.34	1.22	1.22	972.



INPUT FAST FILE : SYS:HT1A.DMP/G  
INPUT EXITT FILE : SCENFOR.EVA  
TENABS OUTPUT FILE: SCENFOR.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	1	0
	3	74
	4	80
	5	82
	7	85
	5	94
	6	96
	5	104
	4	109
	3	114
	10	115

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	7	0
	5	94
	6	96
	5	104
	4	109
	3	114
	10	115

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	104
	4	109
	3	114
	10	115

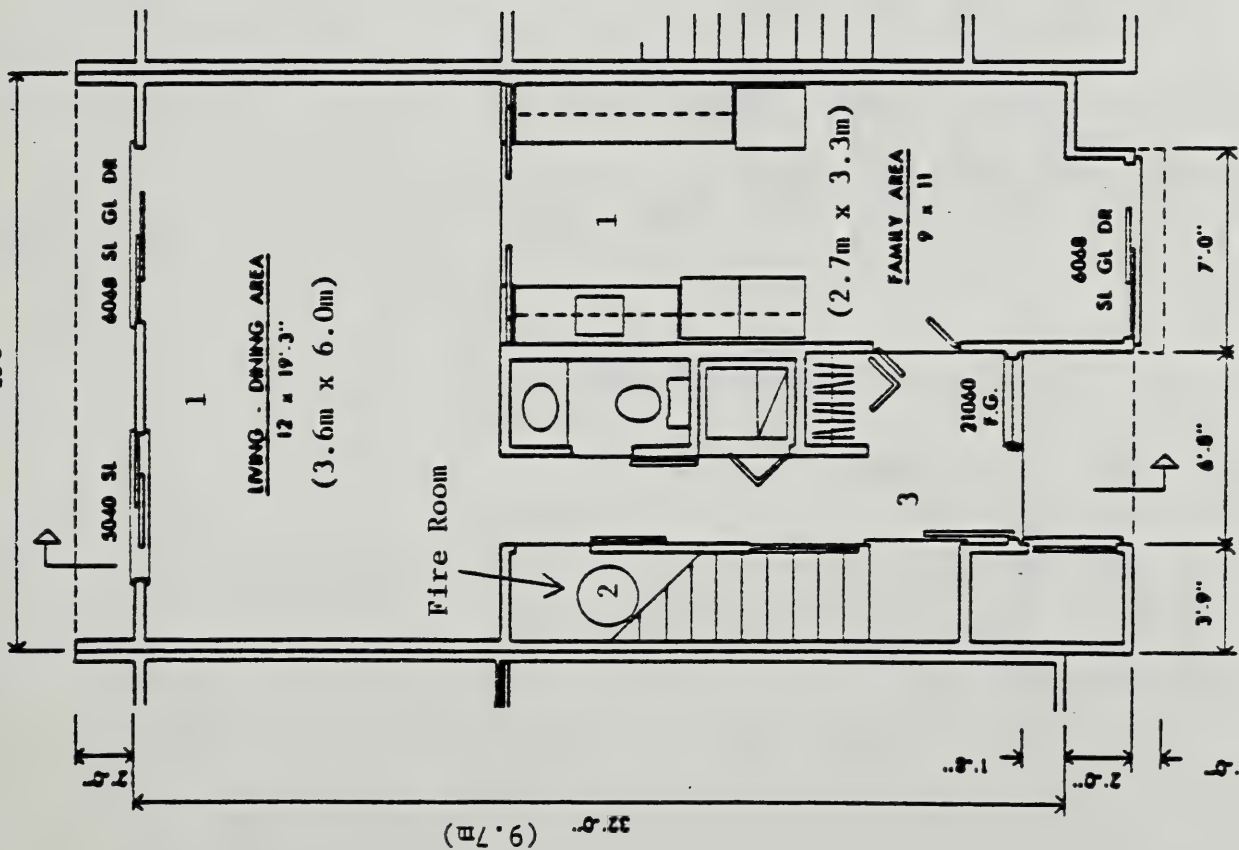
FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1	TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
	2.	OUT	ESCAPE		27.0	0.0	0.00	0.
	15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 2	TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
	2.	OUT	ESCAPE		27.0	0.0	0.00	0.
	15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 3							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
2.	OUT	ESCAPE		27.0	0.0	0.00	0.
15.	OUT	FINAL TIME		27.0	0.0	0.00	0.

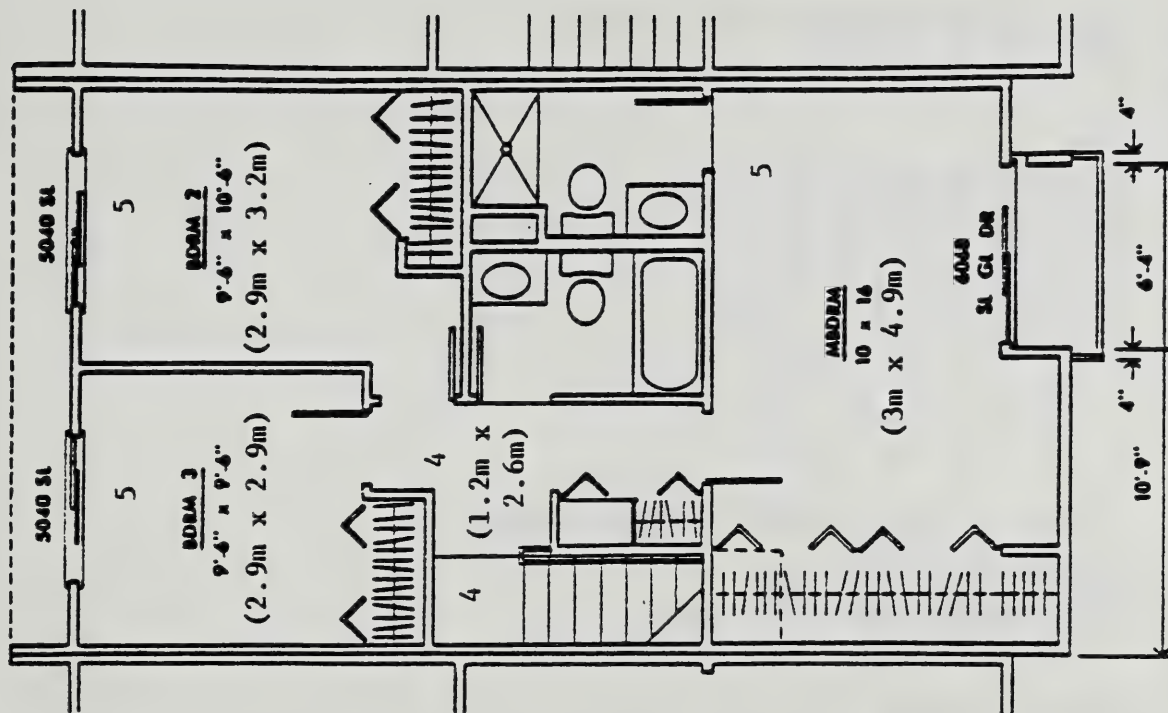
(6.1m)



### LOWER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

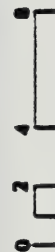
**SMS**



## UPPER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

53



VERSN 017 TOWN HOUSE-CLOSET FIRE-5  
 TIMES 900 100 0 0 0 .1  
 NROOM 5  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 0.0 0.0 0.0 2.7  
 WIDTH 5.0 1.2 2.1 1.2 4.0  
 DEPTH 8.0 2.1 5.2 6.3 8.1  
 HEIGH 2.4 2.4 2.4 4.9 2.4  
 HVENT 1 3 1.1 2.1 0.0  
 HVENT 2 3 .01 2.1 0.0  
 HVENT 3 4 1.1 2.1 0.0  
 HVENT 4 5 1.1 4.8 2.7  
 HVENT 1 6 1.1 .02 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0  
 LFBO 2  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 18100 300  
 LFMAX 3  
 FTIME 5 850 45  
 FMASS 0.0 .001 .001 .0004  
 FHIGH 0.0 0.0 0.0 0.0  
 FAREA .5 .5 .5 .5 .5  
 CO .03 .03 .03 .03  
 O2 -1.2 -1.2 -1.2 -1.2  
 CO2 1.6 1.6 1.6 1.6  
 OD .02 .02 .02 .02  
 CT 1. 1. 1. 1.

I. OUTPUT - COMPUTER FILES FOR FIRE #4 (5 Compartments)



## TOWN HOUSE-CLOSET FIRE-5

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	5.0	1.2	2.1	1.2	4.0
DEPTH	8.0	2.1	5.2	6.3	8.1
HEIGHT	2.4	2.4	2.4	4.9	2.4
AREA	40.0	2.5	10.9	7.6	32.4
VOLUME	96.0	6.0	26.2	37.0	77.8
CEILING	2.4	2.4	2.4	4.9	5.1
FLOOR	0.0	0.0	0.0	0.0	2.7

## CONNECTIONS

1 ( 1 ) BW= 0.00 0.00 1.10 0.00 0.00 1.10  
 HH= 0.00 0.00 2.10 0.00 0.00 0.02  
 HL= 0.00 0.00 0.00 0.00 0.00 0.00  
 HHP= 0.00 0.00 2.10 0.00 0.00 0.02  
 HLP= 0.00 0.00 0.00 0.00 0.00 0.00

2 ( 1 ) BW= 0.00 0.00 0.01 0.00 0.00 0.00  
 HH= 0.00 0.00 2.10 0.00 0.00 0.00  
 HL= 0.00 0.00 0.00 0.00 0.00 0.00  
 HHP= 0.00 0.00 2.10 0.00 0.00 0.00  
 HLP= 0.00 0.00 0.00 0.00 0.00 0.00

3 ( 1 ) BW= 1.10 0.01 0.00 1.10 0.00 0.00  
 HH= 2.10 2.10 0.00 2.10 0.00 0.00  
 HL= 0.00 0.00 0.00 0.00 0.00 0.00  
 HHP= 2.10 2.10 0.00 2.10 0.00 0.00  
 HLP= 0.00 0.00 0.00 0.00 0.00 0.00

4 ( 1 ) BW= 0.00 0.00 1.10 0.00 1.10 0.00  
 HH= 0.00 0.00 2.10 0.00 4.80 0.00  
 HL= 0.00 0.00 0.00 0.00 2.70 0.00  
 HHP= 0.00 0.00 2.10 0.00 4.80 0.00  
 HLP= 0.00 0.00 0.00 0.00 2.70 0.00

5 ( 1 ) BW= 0.00 0.00 0.00 1.10 0.00 0.00  
 HH= 0.00 0.00 0.00 4.80 0.00 0.00  
 HL= 0.00 0.00 0.00 2.70 0.00 0.00  
 HHP= 0.00 0.00 0.00 4.80 0.00 0.00  
 HLP= 0.00 0.00 0.00 2.70 0.00 0.00

## CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
 SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
 DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
 THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
 EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

## FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
 SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
 DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02

THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 3

TOTAL TIME INTERVAL = 900

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 1.00E-03 1.00E-03 4.00E-04  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4  
CO2= 1.6 1.6 1.6 1.6  
CO= 3.00E-02 3.00E-02 3.00E-02 3.00E-02  
OD= 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
CT= 1.0 1.0 1.0 1.0  
FTIME= 5.0 8.50E+02 45.

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	307.2	347.4	331.1	306.7	300.4
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	24.5	3.2	11.1	26.1	34.9
UL. THICK	0.6	1.3	1.0	3.5	1.1
CE. TEMP	300.6	308.8	304.6	300.5	300.0
UW. TEMP	300.4	306.1	303.1	300.3	300.0
LW. TEMP	300.1	300.5	300.3	300.0	300.0
FL. TEMP	300.1	300.8	300.5	300.0	300.0
PLUME	0.000E+00	3.155E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.238E-03	1.955E-02	9.239E-03	3.557E-03	2.271E-04
	3.352E-03	2.119E-02	1.586E-02	1.810E-03	1.686E-04
QSCW	3.127E-02	3.030E-01	1.894E-01	2.871E-02	8.305E-04
	-9.533E-05	-1.706E-03	-9.788E-04	-3.797E-05	-1.123E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.055E+05	2.025E+05	2.028E+05	2.059E+05	2.069E+05
CO2	PPM	1.069E+03	3.308E+03	3.039E+03	805.	59.9
CO	PPM	31.5	97.5	89.6	23.7	1.76
OD	1/M	8.146E-02	0.223	0.215	6.145E-02	4.667E-03
CT	GM/M3	0.936	4.81	3.48	0.555	3.459E-02

TIME = 200.0 SECONDS.

U. TEMP	309.2	348.3	333.1	312.2	302.6
L. TEMP	300.0	300.1	300.1	300.0	300.0
UL. VOLUM	39.6	3.2	11.0	24.4	53.7
UL. THICK	1.0	1.3	1.0	3.2	1.7
CE. TEMP	301.3	312.1	307.1	301.6	300.2
UW. TEMP	300.9	308.5	304.9	301.1	300.1
LW. TEMP	300.2	300.8	300.6	300.1	300.0
FL. TEMP	300.3	301.4	301.0	300.2	300.0
PLUME	0.000E+00	3.137E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	1.400E-03	1.443E-02	4.247E-03	5.731E-03	1.137E-03
	6.099E-03	2.557E-02	2.042E-02	3.773E-03	1.509E-03
QSCW	3.885E-02	2.772E-01	1.830E-01	5.771E-02	8.168E-03
	-4.082E-04	-3.295E-03	-2.278E-03	-2.042E-04	-5.096E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.045E+05	2.023E+05	2.025E+05	2.045E+05	2.064E+05
CO2 PPM	1.809E+03	3.329E+03	3.289E+03	1.812E+03	444.
CO PPM	53.3	98.1	96.9	53.4	13.1
OD 1/M	0.137	0.224	0.231	0.136	3.432E-02
CT GM/M3	3.69	10.1	8.87	2.89	0.452



TIME = 300.0 SECONDS.

U. TEMP	309.0	350.7	332.6	313.2	303.9
L. TEMP	300.1	300.2	300.2	300.0	300.0
UL VOLUM	49.2	3.3	12.4	26.7	68.9
UL THICK	1.2	1.3	1.1	3.5	2.1
CE TEMP	301.7	314.6	308.6	302.5	300.4
UW TEMP	301.1	310.4	306.0	301.8	300.3
LW TEMP	300.3	301.2	300.9	300.2	300.1
FL TEMP	300.4	301.9	301.5	300.3	300.1
PLUME	0.000E+00	2.919E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	8.114E-04	1.267E-02	1.449E-03	5.339E-03	1.469E-03
	7.091E-03	3.001E-02	2.368E-02	5.782E-03	3.335E-03
QSCW	3.533E-02	2.753E-01	1.646E-01	5.778E-02	1.302E-02
	-6.421E-04	-4.804E-03	-3.460E-03	-4.442E-04	-1.540E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.041E+05	2.021E+05	2.024E+05	2.037E+05	2.058E+05
CO2 PPM	2.124E+03	3.501E+03	3.295E+03	2.372E+03	857.
CO PPM	62.6	103.	97.1	69.9	25.2
OD 1/M	0.161	0.234	0.232	0.177	6.601E-02
CT GM/M3	7.25	15.5	14.4	6.73	1.68

TIME = 400.0 SECONDS.

U. TEMP	309.7	359.7	329.6	311.1	303.7
L. TEMP	300.1	300.4	300.3	300.1	300.1
UL. VOLUM	61.1	3.6	15.5	31.3	74.0
UL. THICK	1.5	1.4	1.4	4.1	2.3
CE. TEMP	302.0	318.0	309.4	302.8	300.6
UW. TEMP	301.4	312.9	306.6	302.0	300.4
LW. TEMP	300.4	301.6	301.2	300.3	300.1
FL. TEMP	300.6	302.6	301.9	300.5	300.2
PLUME	0.000E+00	2.329E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	9.092E-04	1.675E-02	-5.326E-05	3.952E-03	1.222E-03
	8.827E-03	4.029E-02	2.722E-02	8.038E-03	3.847E-03
QSCW	3.732E-02	3.294E-01	1.315E-01	4.173E-02	1.166E-02
	-8.582E-04	-6.865E-03	-4.572E-03	-6.487E-04	-1.423E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.037E+05	2.010E+05	2.023E+05	2.036E+05	2.055E+05
CO2	PPM	2.413E+03	4.307E+03	3.350E+03	2.474E+03	1.082E+03
CO	PPM	71.1	127.	98.7	72.9	31.9
OD	1/M	0.182	0.280	0.238	0.186	8.338E-02
CT	GM/M3	11.4	21.6	20.1	11.1	3.48

TIME = 500.0 SECONDS.

U.TEMP	309.4	385.5	324.4	309.9	303.4
L.TEMP	300.3	300.9	300.6	300.3	300.3
UL.VOLUM	73.1	4.3	18.7	34.4	75.9
UL.THICK	1.8	1.7	1.7	4.5	2.3
CE.TEMP	302.3	325.0	309.3	302.9	300.6
UW.TEMP	301.6	318.1	306.6	302.1	300.5
LW.TEMP	300.5	302.6	301.5	300.4	300.2
FL.TEMP	300.8	304.1	302.3	300.7	300.3
PLUME	0.000E+00	1.217E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	7.107E-04	3.669E-02	-1.300E-03	3.251E-03	9.812E-04
	1.015E-02	7.577E-02	2.883E-02	1.077E-02	3.711E-03
QSCW	3.371E-02	5.187E-01	9.028E-02	3.305E-02	9.622E-03
	-9.725E-04	-1.189E-02	-5.242E-03	-7.660E-04	-4.883E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.034E+05	1.967E+05	2.023E+05	2.035E+05	2.053E+05
CO2 PPM	2.619E+03	7.373E+03	3.408E+03	2.550E+03	1.234E+03
CO PPM	77.2	217.	100.	75.1	36.4
OD 1/M	0.198	0.448	0.246	0.193	9.524E-02
CT GM/M3	15.9	30.1	25.8	15.6	5.61

TIME = 600.0 SECONDS.

U. TEMP	308.6	406.1	320.6	308.8	303.0
L. TEMP	300.5	301.9	301.0	300.6	300.4
UL. VOLUM	82.5	5.0	21.5	36.1	76.6
UL. THICK	2.1	2.0	2.0	4.8	2.4
CE. TEMP	302.4	333.8	309.0	302.9	300.7
UW. TEMP	301.7	324.7	306.5	302.1	300.5
LW. TEMP	300.6	304.5	301.8	300.6	300.2
FL. TEMP	301.0	307.0	302.8	301.0	300.4
PLUME	0.000E+00	7.456E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	4.728E-04	5.320E-02	-1.748E-03	2.711E-03	7.900E-04
QSCW	1.066E-02	1.369E-01	3.059E-02	1.294E-02	3.398E-03
	2.799E-02	6.372E-01	6.350E-02	2.642E-02	7.847E-03
	-8.232E-04	-2.198E-02	-5.393E-03	-5.956E-04	-7.405E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.031E+05	1.912E+05	2.019E+05	2.033E+05	2.051E+05
CO2 PPM	2.791E+03	1.133E+04	3.661E+03	2.687E+03	1.357E+03
CO PPM	82.2	334.	108.	79.2	40.0
OD 1/M	0.212	0.653	0.267	0.204	0.105
CT GM/M3	20.8	43.2	31.9	20.3	8.00

TIME = 700.0 SECONDS.

U. TEMP	307.7	425.5	317.9	307.9	302.7
L. TEMP	300.9	304.1	301.6	301.0	300.4
UL. VOLUM	88.8	5.5	23.5	36.8	77.0
UL. THICK	2.2	2.2	2.2	4.9	2.4
CE. TEMP	302.5	343.1	308.8	303.0	300.7
UW. TEMP	301.7	331.8	306.4	302.1	300.5
LW. TEMP	300.7	307.6	302.0	300.7	300.2
FL. TEMP	301.2	311.8	303.2	301.2	300.4
PLUME	0.000E+00	4.500E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.716E-04	7.145E-02	-1.957E-03	2.215E-03	6.297E-04
	1.047E-02	2.260E-01	3.156E-02	1.312E-02	3.050E-03
QSCW	2.255E-02	7.353E-01	4.612E-02	2.077E-02	6.346E-03
	-4.291E-04	-3.737E-02	-4.840E-03	-3.359E-04	4.509E-08

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.029E+05	1.836E+05	2.014E+05	2.030E+05	2.050E+05
CO2	PPM	/	2.958E+03	1.689E+04	4.050E+03	2.880E+03	1.465E+03
CO	PPM	/	87.2	498.	119.	84.9	43.2
OD	1/M	/	0.225	0.930	0.298	0.219	0.113
CT	GM/M3	/	26.0	61.9	38.6	25.3	10.6



TIME = 800.0 SECONDS.

U. TEMP	306.9	440.9	315.8	307.0	302.4
L. TEMP	301.2	308.3	302.3	301.2	300.5
UL. VOLUM	92.3	5.8	24.7	36.9	77.1
UL. THICK	2.3	2.3	2.3	4.9	2.4
CE. TEMP	302.5	352.3	308.6	303.0	300.7
UW. TEMP	301.8	339.0	306.2	302.2	300.5
LW. TEMP	300.8	312.2	302.3	300.8	300.2
FL. TEMP	301.3	318.7	303.7	301.4	300.4
PLUME	0.000E+00	2.759E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.810E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	8.825E-05	8.742E-02	-2.172E-03	1.751E-03	4.925E-04
	9.778E-03	3.361E-01	3.088E-02	1.197E-02	2.713E-03
QSCW	1.796E-02	7.917E-01	3.378E-02	1.603E-02	5.085E-03
	-8.843E-05	-5.501E-02	-3.739E-03	-3.013E-04	5.103E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.027E+05	1.738E+05	2.007E+05	2.027E+05	2.048E+05
CO2 PPM	3.135E+03	2.393E+04	4.533E+03	3.118E+03	1.564E+03
CO PPM	92.4	705.	134.	91.9	46.1
OD 1/M	0.239	1.27	0.336	0.238	0.121
CT GM/M3	31.5	88.0	46.2	30.7	13.4

TIME = 900.0 SECONDS.

U. TEMP	306.3	413.4	314.5	306.4	302.1
L. TEMP	301.4	310.6	303.0	301.4	300.5
UL. VOLUM	93.9	5.8	25.5	36.9	77.1
UL. THICK	2.3	2.3	2.3	4.9	2.4
CE. TEMP	302.5	356.6	308.5	303.0	300.7
UW. TEMP	301.8	342.7	306.2	302.2	300.5
LW. TEMP	300.8	315.8	302.5	300.9	300.3
FL. TEMP	301.4	323.5	304.1	301.6	300.5
PLUME	0.000E+00	1.517E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-04	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-6.228E-05	3.442E-02	-2.185E-03	1.421E-03	3.791E-04
	8.965E-03	2.847E-01	3.012E-02	1.071E-02	2.409E-03
QSCW	1.454E-02	4.504E-01	2.626E-02	1.284E-02	4.076E-03
	9.616E-07	-7.358E-02	-2.818E-03	-2.704E-04	1.108E-06

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.024E+05	1.702E+05	1.999E+05	2.023E+05	2.047E+05
CO2	PPM	/	3.334E+03	2.653E+04	5.150E+03	3.409E+03	1.660E+03
CO	PPM	/	98.2	782.	152.	100.	48.9
OD	1/M	/	0.255	1.50	0.384	0.261	0.129
CT	GM/M3	/	37.4	122.	54.7	36.7	16.4



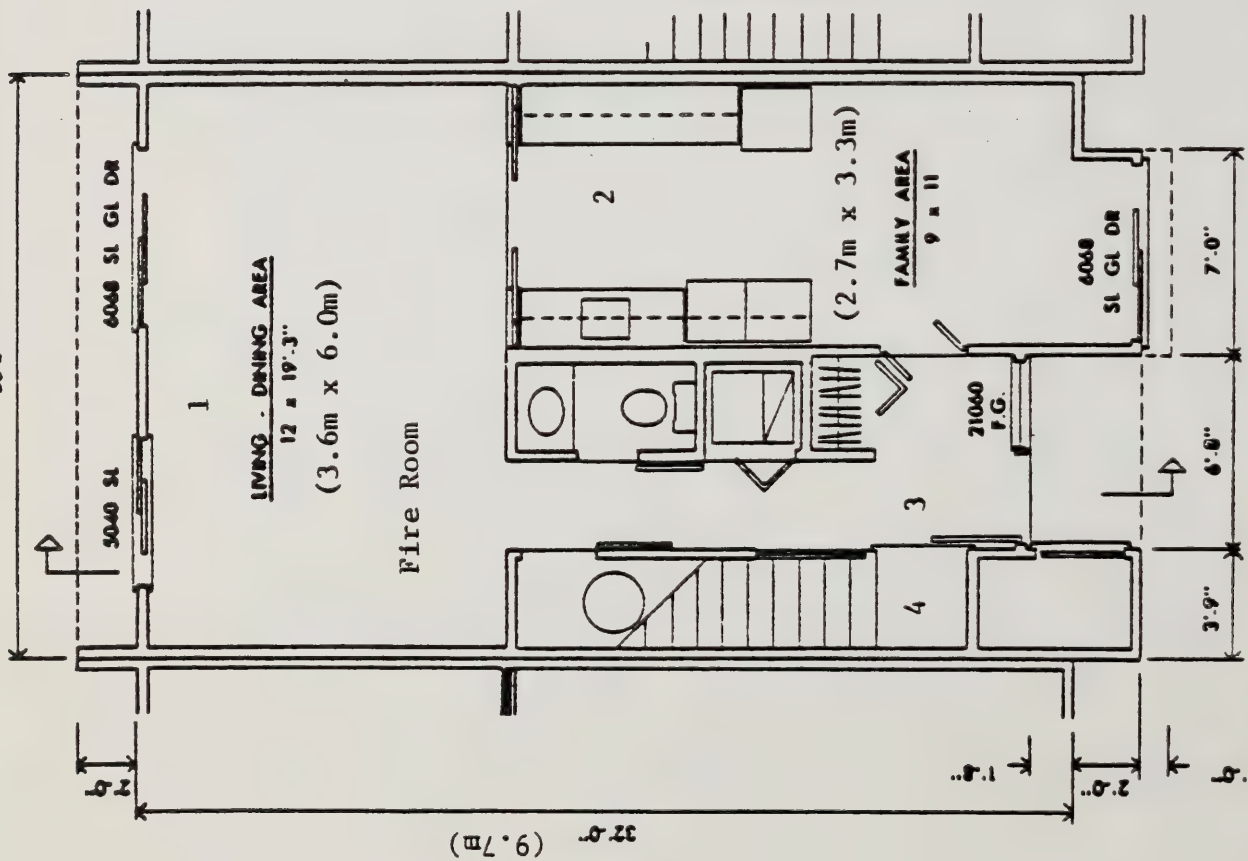
FIRE #5

CHRISTMAS TREE AND BEAN BAG

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)

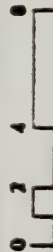
(6.1m)

20'-0"

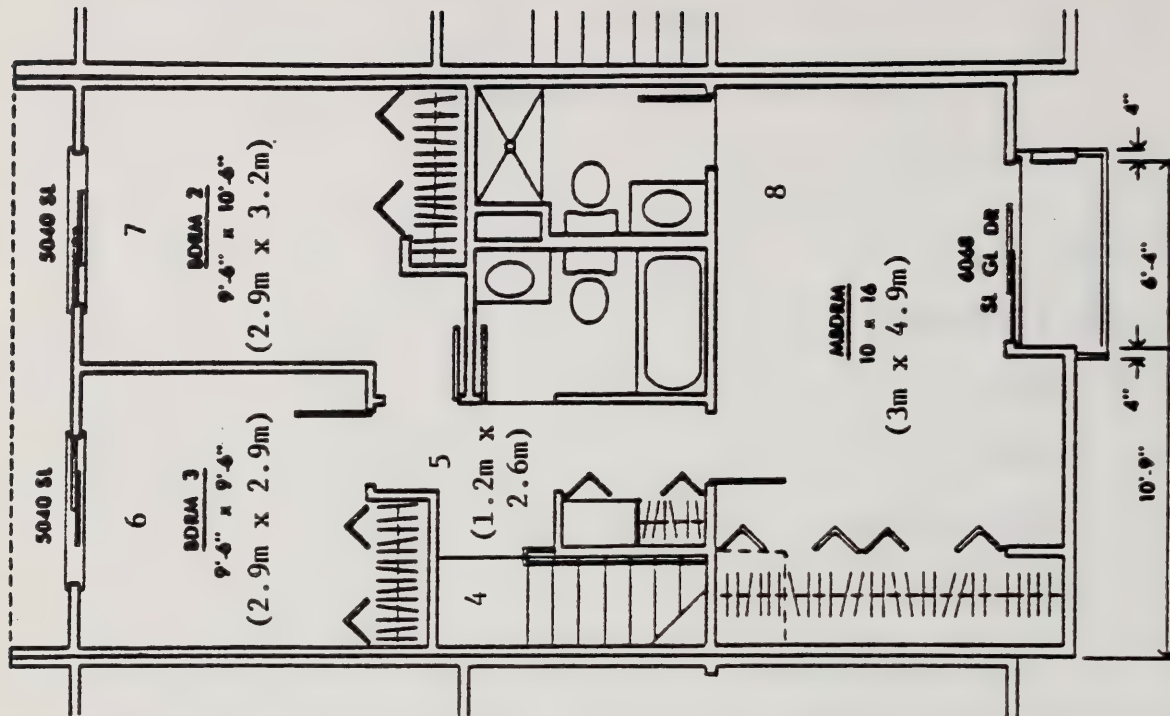


### LOWER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

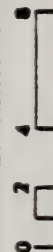


NBS



### UPPER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977



NBS

A - Floor Plan for FIRE #5



## B. FUEL LOAD BACKGROUND FOR FIRE #5

### FIRE #5 - CHRISTMAS TREE

BUILDING: Townhouse

OCCUPANTS: Parents fully capable.

Father aged 25 asleep in bedroom 1.

Mother aged 23 asleep in bedroom 1.

Boy aged 2 asleep in bedroom 2.

Infant asleep in bedroom 3.

DOORS: All bedroom doors closed.

FIRE: Electrical fire in living room ignites natural Christmas tree in living room. Bean bag chair is second item to ignite.

FUEL: Material Code: CTR001  
Material ID: Christmas tree, spruce, dry  
Material Code: CHR001  
Material ID: Bean bag, vinyl PS foam beads

Species (CO<sub>2</sub>, CO, OD) were not available for the Christmas tree. Approximate values for the species have been added to the fuel.

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

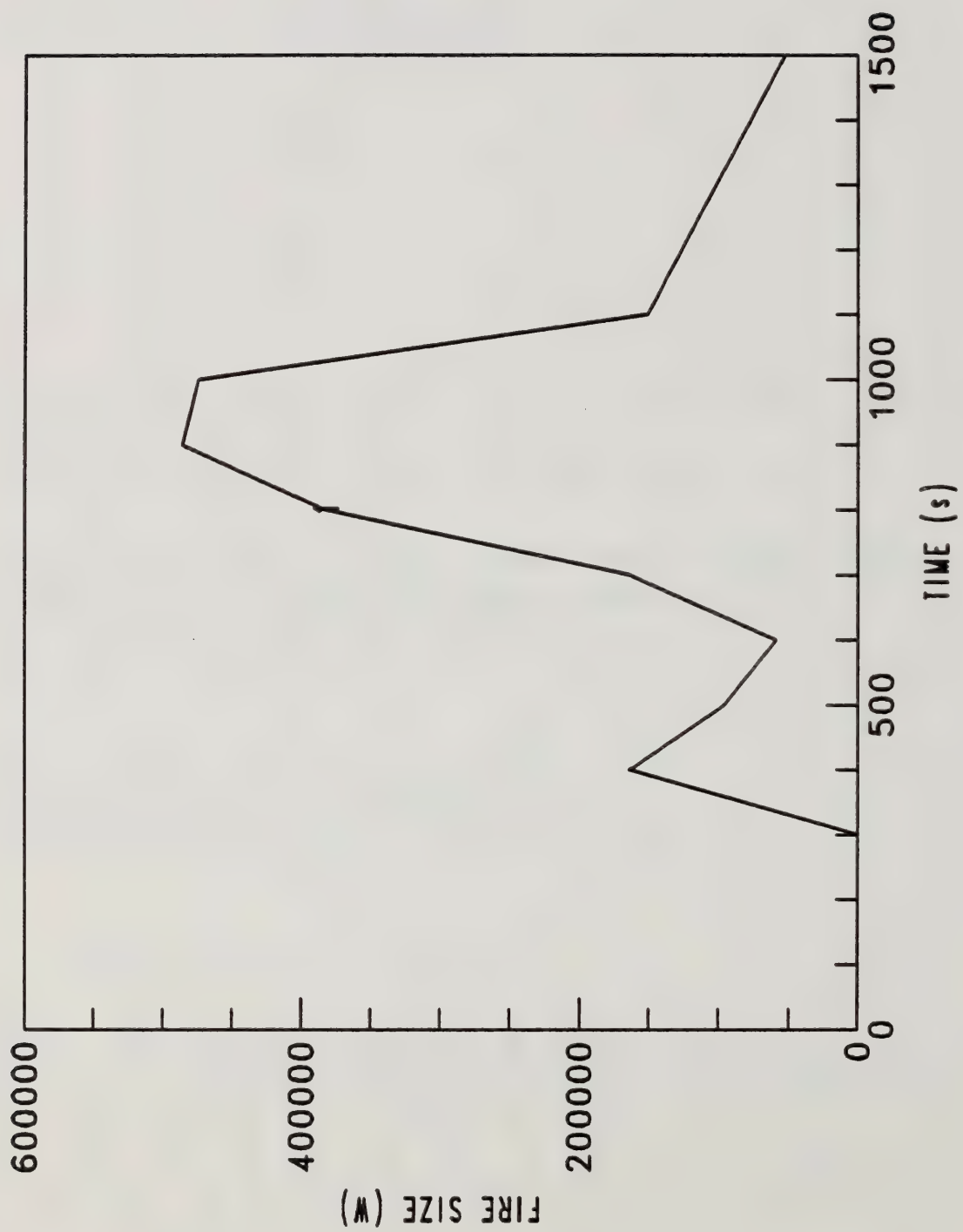
FIRE ROOM: Living and dining area

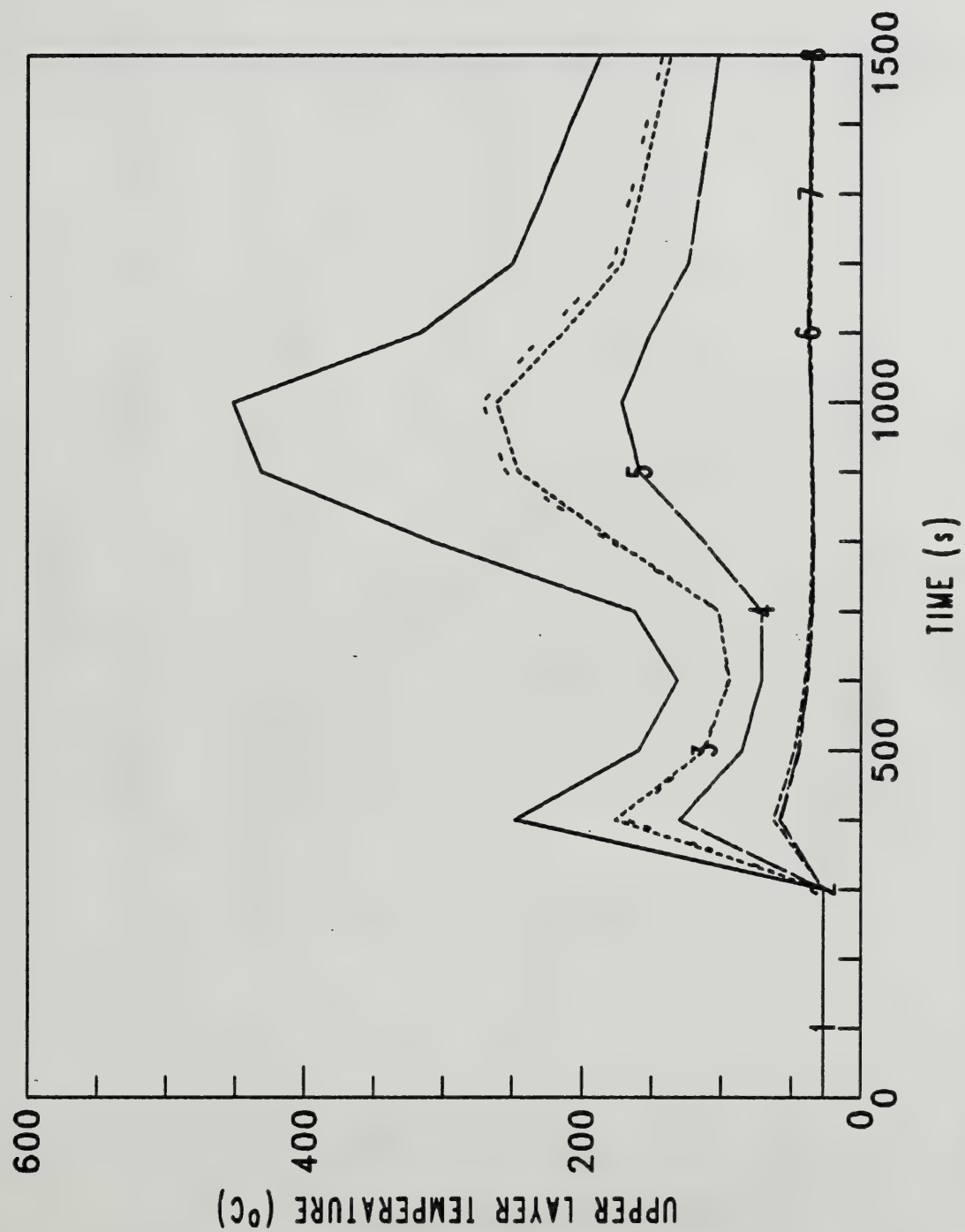
FLASHOVER

TIME: No flashover

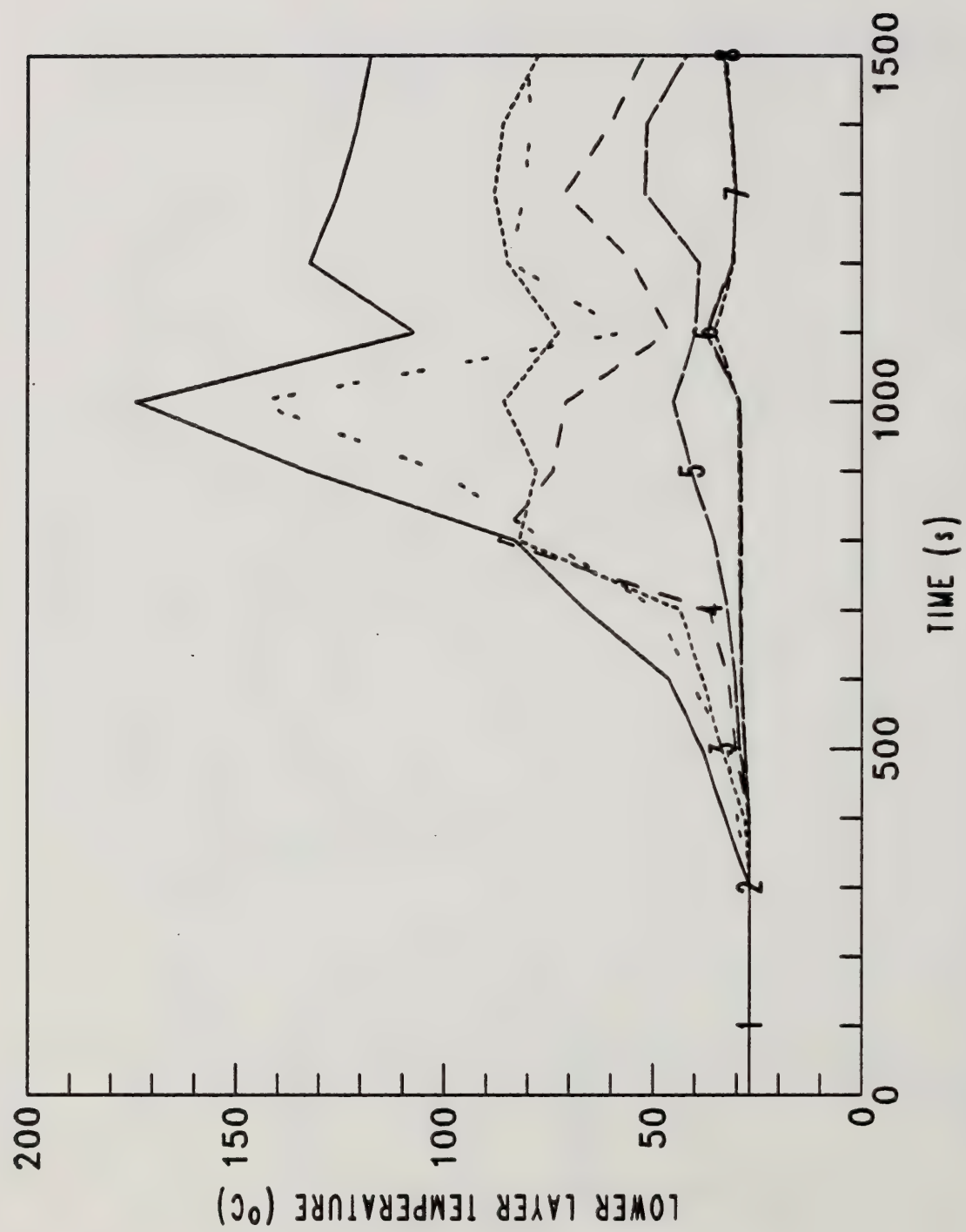
VERSN	017 TOWN HOUSE													
TIMES	1850	100	0	0	0	0								
NROOM	8													
NMXOP	1													
TAMB	300													
HI/F	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7						
WIDTH	6.0	2.7	2.1	1.2	1.5	2.9	2.9	4.9						
DEPTH	3.6	6.9	5.2	3.0	2.6	2.9	3.2	3.0						
HEIGH	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4						
HVENT	1	2	1.1	2.1	0.0									
HVENT	1	3	1.1	2.1	0.0									
HVENT	2	9	1.1	0.2	0.0									
HVENT	3	4	1.1	2.1	0.0									
HVENT	4	5	1.1	4.8	2.7									
HVENT	5	6	.01	2.1	0.0									
HVENT	5	7	.01	2.1	0.0									
HVENT	5	8	.01	2.1	0.0									
HVENT	2	3	1.1	2.1	0.0									
CEILI														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018					
SPHT	.9	.9	.9	.9	.9	.9	.9	.9						
DNSTY	790	790	790	790	790	790	790	790	790					
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016					
EMISS	.9	.9	.9	.9	.9	.9	.9	.9						
WALLS														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018					
SPHT	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9					
DNSTY	790	790	790	790	790	790	790	790	790					
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016					
EMISS	.9	.9	.9	.9	.9	.9	.9	.9						
FLOOR														
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001				
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4					
DNSTY	300	300	300	300	300	300	300	300	300					
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127				
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0					
LFBO	1													
LFBT	1													
LFPOS	1													
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	32800	300						
LFMAX	12													
FTIME	300	20	30	50	50	150	75	175	170	80	400	300		
FMASS	.0	.0	.02	.02	.005	.0035	.0018	.0033	.015	.0144	.0046	.0016	.0	
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FAREA	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5		
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.		
O2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2

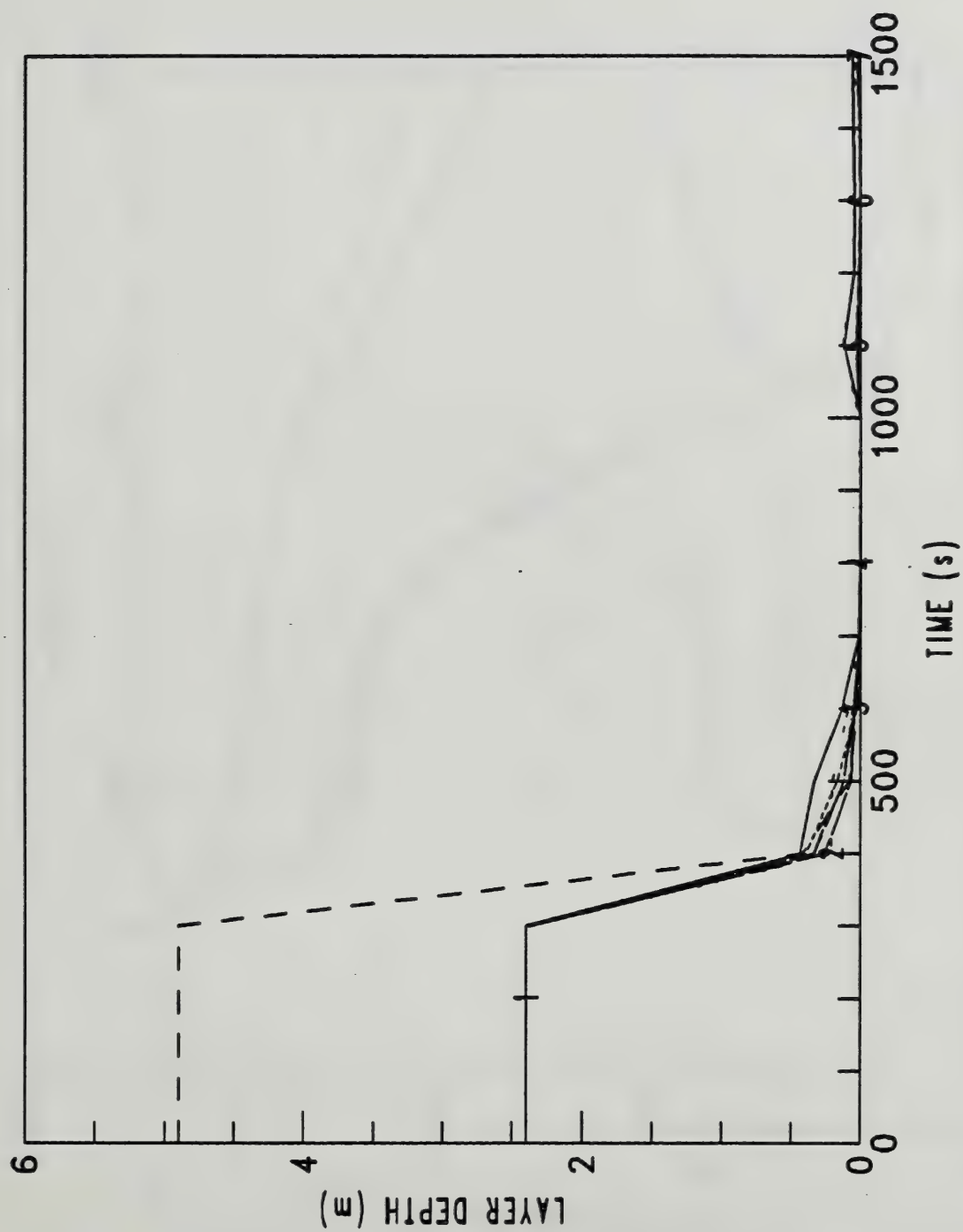
**D. OUTPUT GRAPHS FOR FIRE #5**

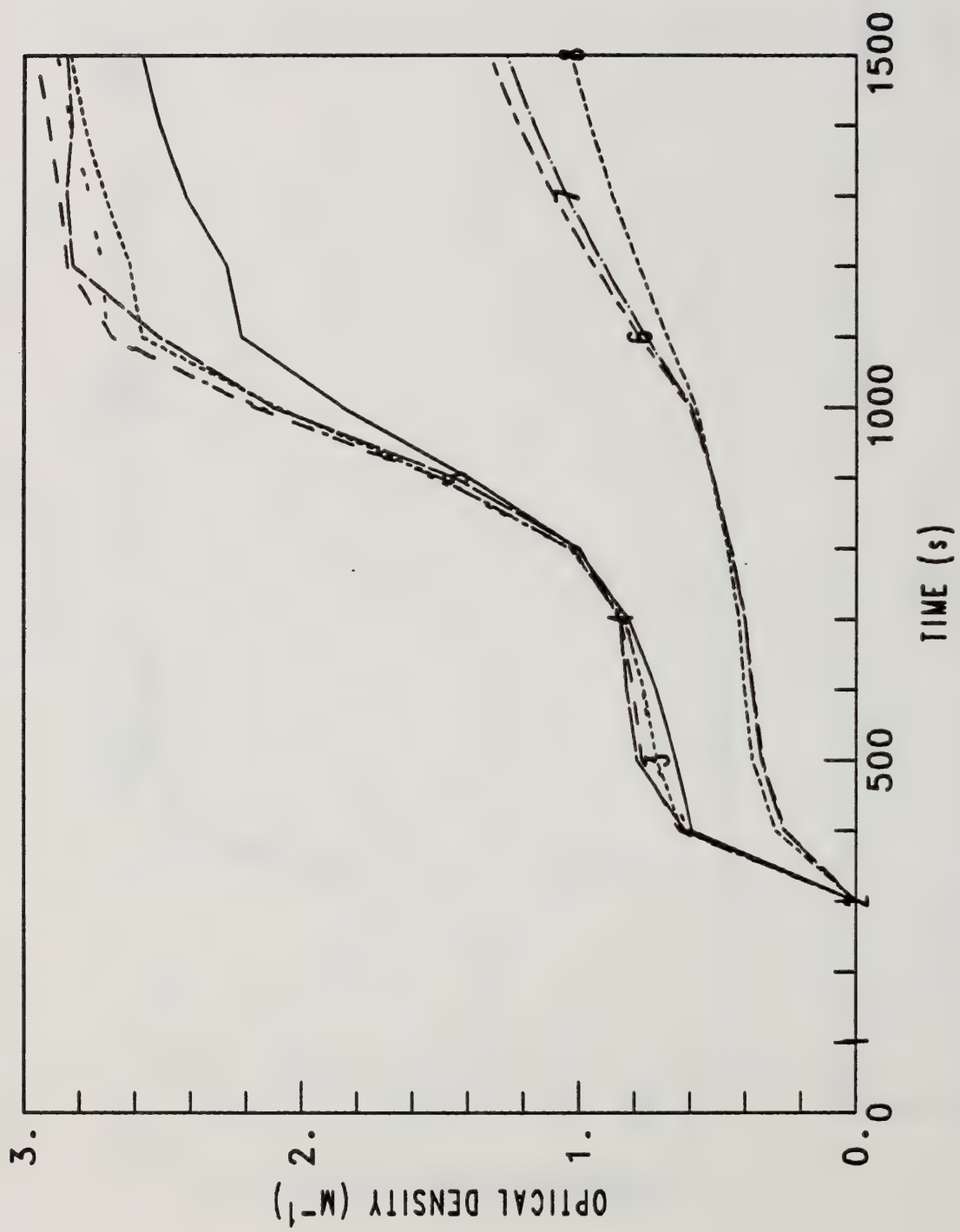


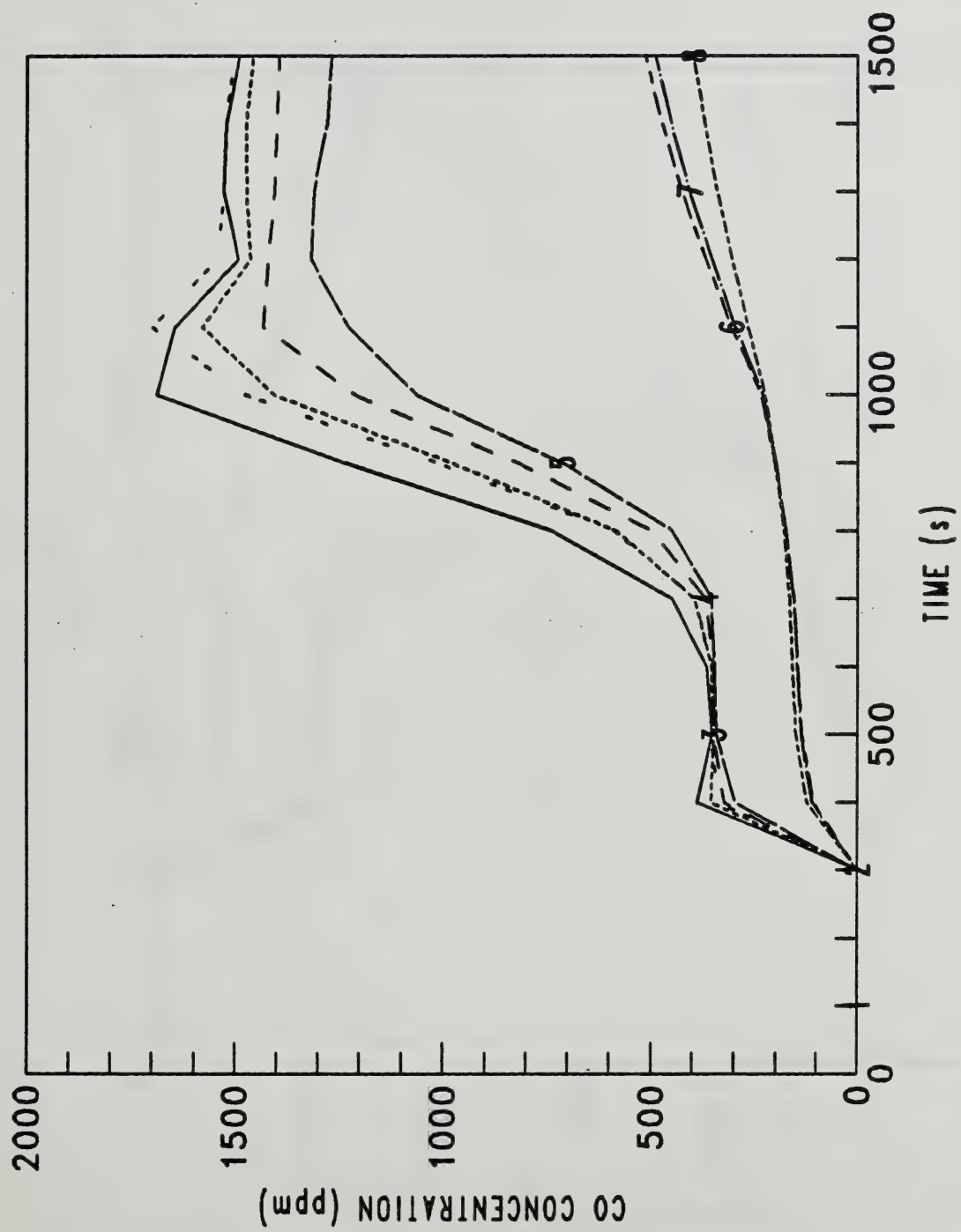


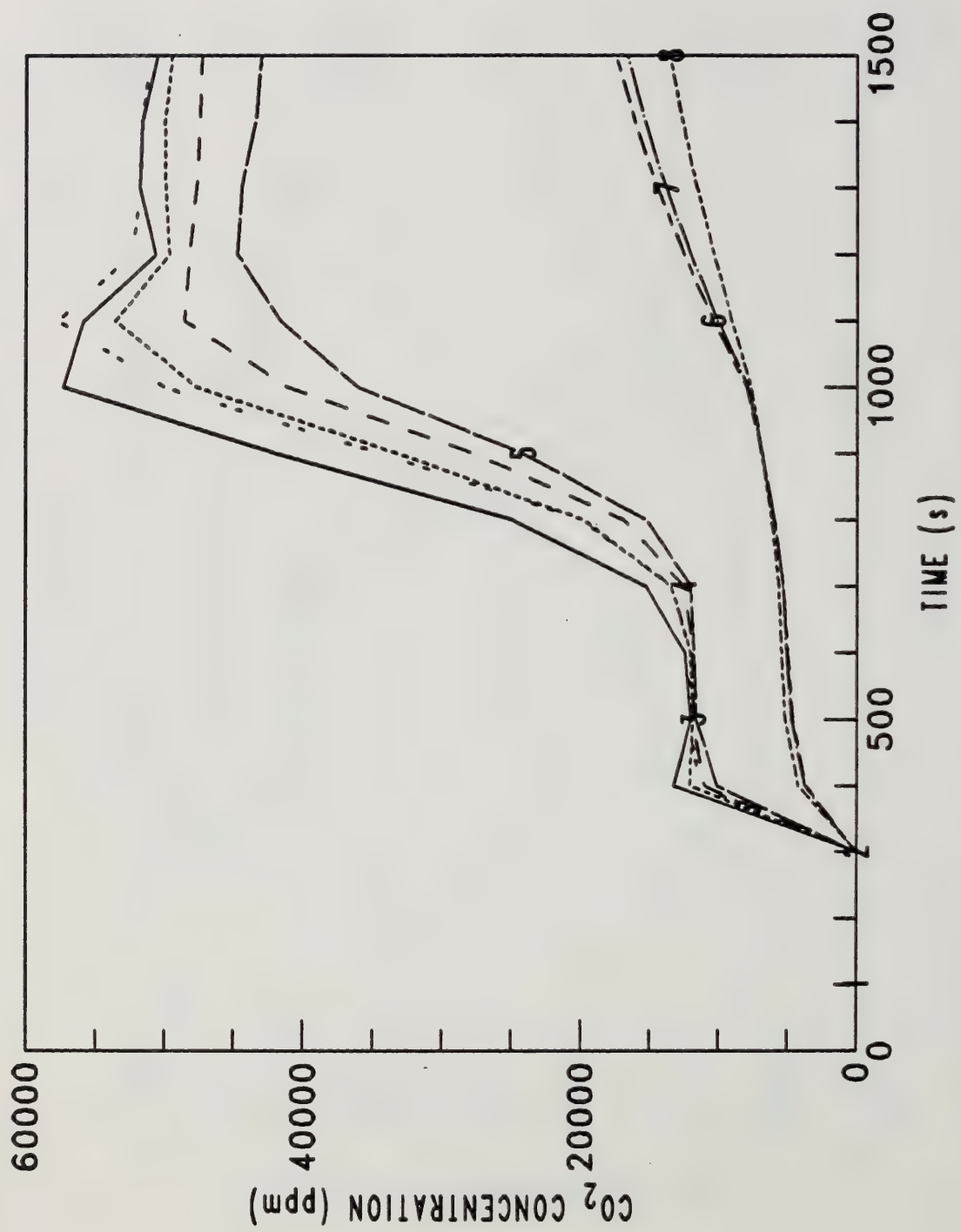




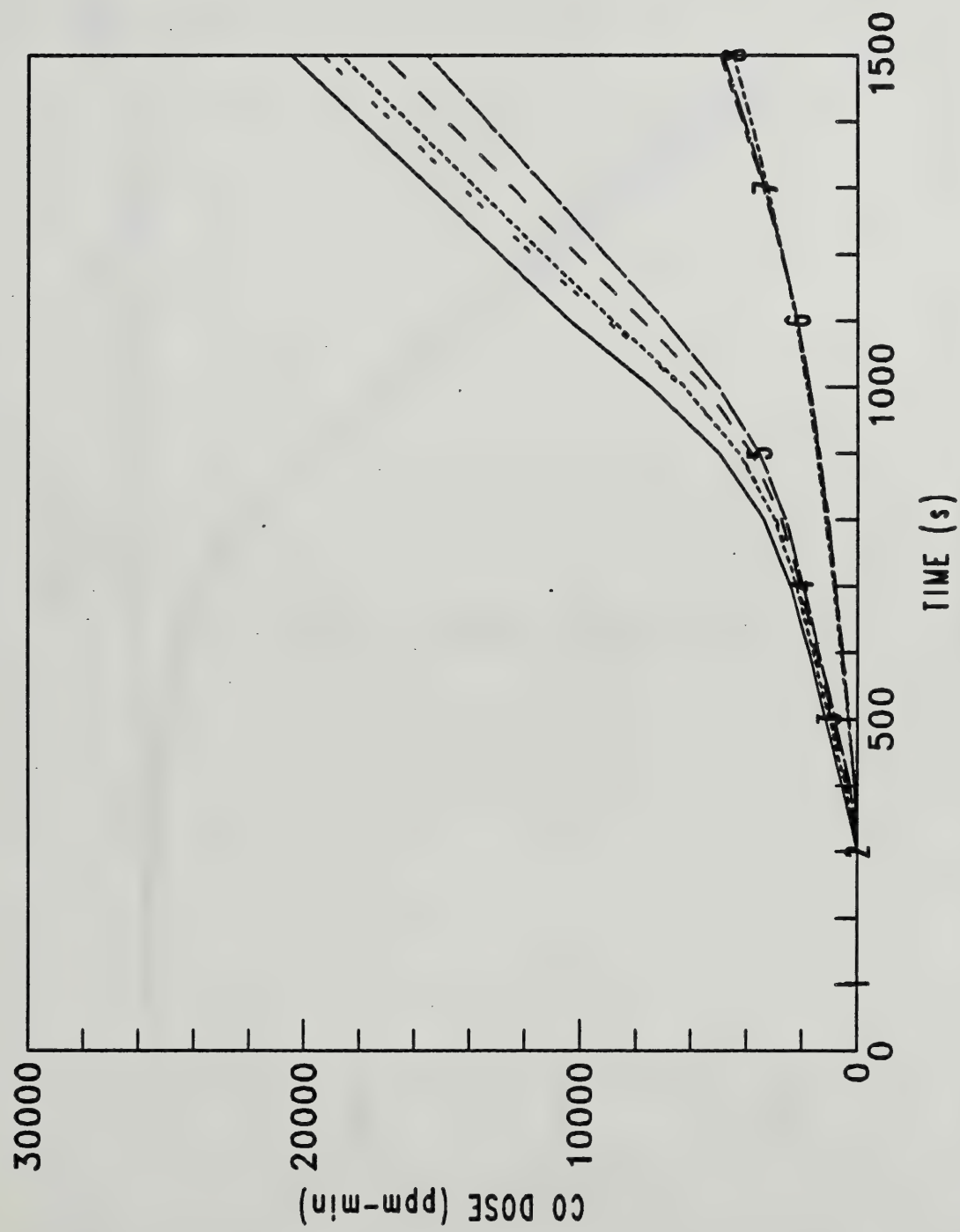


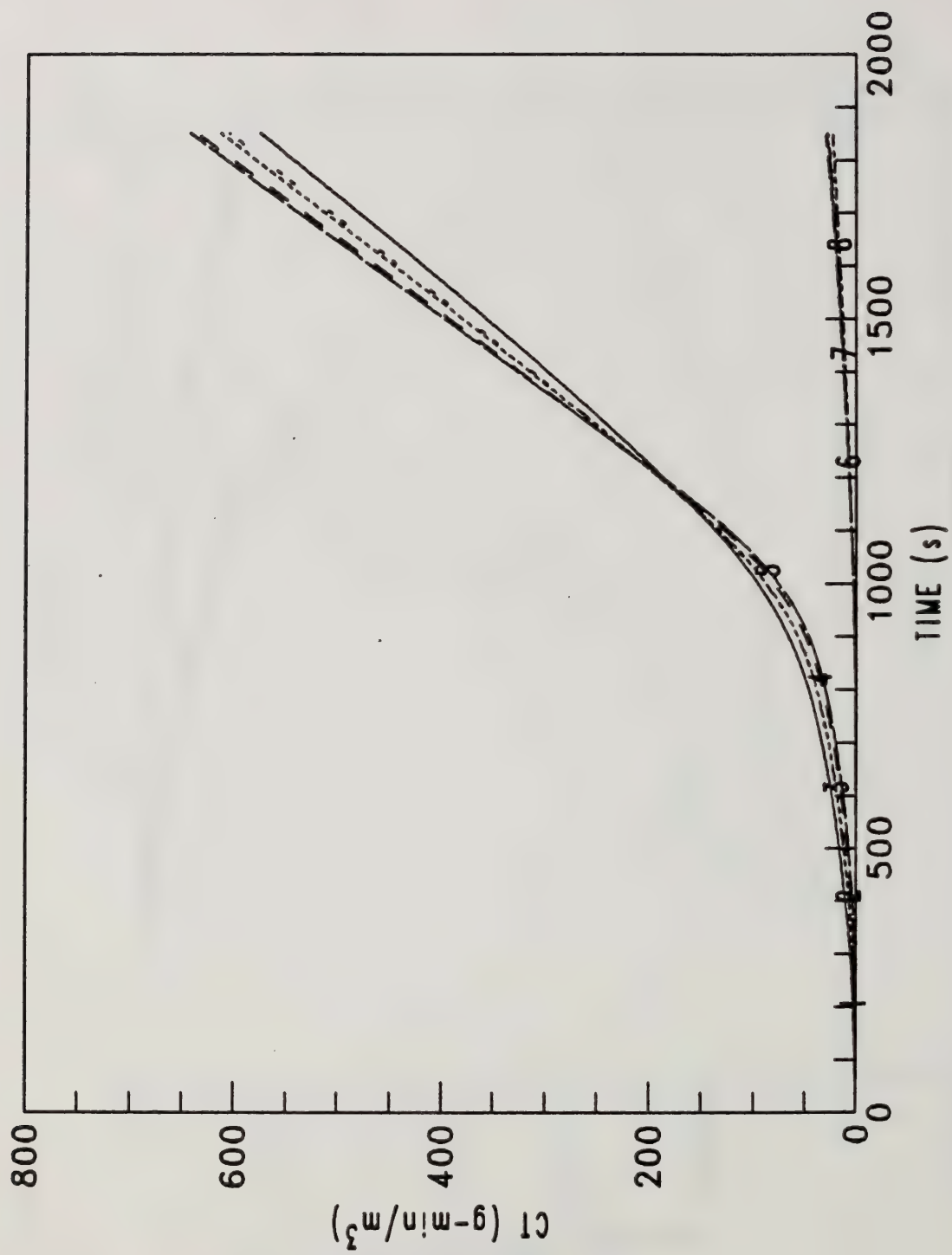












E. OUTPUT - COMPUTER FILE FOR FIRE #5

## TOWN HOUSE

TOTAL COMPARTMENTS =	8
MAXIMUM OPENINGS PER PAIR =	1

## FLOOR PLAN

	6.0	2.7	2.1	1.2	1.5	2.9	2.9	4.9
WIDTH	6.0	2.7	2.1	1.2	1.5	2.9	2.9	4.9
DEPTH	3.6	6.9	5.2	3.0	2.6	3.2	3.2	3.0
HEIGHT	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
AREA	21.6	18.6	10.9	3.6	3.9	8.4	9.3	14.7
VOLUME	51.8	44.7	26.2	17.6	9.4	20.2	22.3	35.3
Ceiling	2.4	2.4	2.4	4.9	5.1	5.1	5.1	5.1
FLOOR	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BW=	1.10	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00
	HH=	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	HHP=	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BW=	1.10	1.10	0.00	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	2.10	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	2.10	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BW=	0.00	0.00	1.10	0.00	1.10	0.00	1.10	0.00	0.00	0.00	0.00
5 ( 1 )	HH=	0.00	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	0.00	2.10	0.00	4.80	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00
6 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00	0.01	0.01	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	4.80	0.00	0.00	2.10	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00	0.00	4.80	4.80	0.00	0.00
7 ( 1 )	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00	2.70	2.70	0.00	0.00
	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 ( 1 )	HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00
	BW=	0.00	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00





	CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.			
0	FTIME=	3.00E+02	20.	30.	50.	50.	1.50E+02	75.	1.70E+02	80.	4.00E+02	3.00E+02

[illegible]

	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2	/						2.070E+05
CO2	/						0.000E+00
CO	/						0.000E+00
OD	1/M						0.000E+00
CT	GM/M3						0.000E+00



[illegible]

	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
O2	/							
CO2	/							
CO	/							
OD	/							
CT	GM/M3							



U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UM. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLITS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	5.822E-10	5.230E-10	6.670E-10	1.151E-09	-8.924E-07	-1.156E-06	-1.163E-06	-1.163E-06	-1.188E-06	-1.188E-06	-1.188E-06
	-1.853E-10	-1.502E-10	-1.794E-10	1.017E-10	1.452E-07	2.688E-07	2.805E-07	2.805E-07	3.326E-07	3.326E-07	3.326E-07
QSCW	6.237E-13	5.398E-13	4.033E-13	6.346E-11	-7.161E-10	-8.427E-10	-8.510E-10	-8.510E-10	-8.806E-10	-8.806E-10	-8.806E-10
	2.917E-10	2.605E-10	3.482E-10	-1.148E-09	-5.391E-06	-7.757E-06	-8.850E-06	-8.850E-06	-8.204E-06	-8.204E-06	-8.204E-06

[illegible]



TIME = 400.0 SECONDS.

U. TEMP	515.6	439.9	446.3	400.0	376.6	328.1	329.0	333.0
L. TEMP	305.4	302.9	301.2	300.4	300.3	300.1	300.1	300.2
UL. VOLUM	43.7	41.2	22.4	16.3	8.4	17.5	19.3	29.9
UL. THICK	2.0	2.2	2.0	4.5	2.1	2.1	2.1	2.0
CE. TEMP	362.2	330.6	336.6	322.8	315.8	304.3	304.5	305.2
EW. TEMP	344.8	321.4	325.9	316.0	310.9	302.9	303.0	303.5
LW. TEMP	313.1	305.5	305.3	302.1	301.7	300.5	300.5	300.6
FL. TEMP	320.7	309.0	308.6	303.5	302.9	300.8	300.9	301.0
PLUME	3.281E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	5.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	1.640E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.725E-01	9.641E-02	9.636E-02	7.134E-02	4.205E-02	1.148E-02	1.168E-02	1.252E-02
	5.196E-01	2.618E-01	2.547E-01	1.193E-01	9.630E-02	2.785E-02	2.908E-02	3.438E-02
QSCW	1.502E+00	1.061E+00	1.051E+00	7.036E-01	5.303E-01	1.641E-01	1.705E-01	2.007E-01
	-9.340E-02	-2.755E-02	-3.573E-02	-1.136E-02	-9.028E-03	-1.512E-03	-1.607E-03	-2.043E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.771E+05	1.815E+05	1.798E+05	1.827E+05	1.852E+05	1.994E+05	1.992E+05	1.982E+05
CO2 PPM	1.272E+04	1.084E+04	1.158E+04	1.034E+04	9.258E+03	3.249E+03	3.332E+03	3.758E+03
CO PPM	375.	319.	341.	305.	273.	95.7	98.2	111.
OD 1/M	0.577	0.577	0.608	0.605	0.575	0.232	0.237	0.264
CT GM/M3	10.5	8.74	9.67	8.15	6.95	2.75	2.81	3.11

TIME = 500.0 SECONDS.

U. TEMP	430.3	385.1	384.0	357.3	343.2	316.2	316.8	319.5
L. TEMP	311.3	305.4	307.0	303.3	302.2	301.1	301.1	301.2
UL. VOLUM	45.9	41.6	24.8	17.4	9.1	19.3	21.3	33.4
UL. THICK	2.1	2.2	2.3	4.8	2.3	2.3	2.3	2.3
CE. TEMP	353.7	330.3	332.8	321.2	315.0	304.5	304.6	305.4
UW. TEMP	339.7	321.9	323.9	315.4	310.7	303.1	303.2	303.8
LW. TEMP	314.7	307.1	307.4	304.0	303.0	300.9	300.9	301.1
FL. TEMP	322.2	311.1	311.6	306.4	304.8	301.5	301.5	301.8
PLUME	1.814E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.933E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	9.621E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.803E-02	1.716E-02	1.714E-02	2.380E-02	1.197E-02	3.717E-03	3.697E-03	3.586E-03
	3.077E-01	1.726E-01	1.845E-01	1.215E-01	8.228E-02	2.364E-02	2.450E-02	2.895E-02
QSCW	6.577E-01	4.525E-01	4.137E-01	2.706E-01	1.998E-01	6.505E-02	6.799E-02	8.295E-02
	-5.838E-02	-2.539E-02	-1.905E-02	-1.125E-02	-9.306E-03	-8.102E-04	-8.891E-04	-1.251E-03

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.794E+05	1.795E+05	1.800E+05	1.804E+05	1.813E+05	1.973E+05	1.972E+05	1.961E+05
CO2 PPM	1.173E+04	1.168E+04	1.147E+04	1.131E+04	1.094E+04	4.121E+03	4.197E+03	4.655E+03
CO PPM	346.	344.	338.	333.	322.	121.	124.	137.
OD 1/M	0.638	0.710	0.700	0.741	0.747	0.305	0.310	0.341
CT GM/M3	25.2	24.5	25.6	24.6	23.2	9.32	9.51	10.5

TIME = 600.0 SECONDS.

U. TEMP	404.2	368.0	367.0	344.0	331.9	310.3	310.7	312.6
L. TEMP	317.4	306.9	310.8	305.0	303.3	301.9	301.8	301.8
UL. VOLUM	49.9	43.6	26.0	17.6	9.2	19.9	21.9	34.0
UL. THICK	2.3	2.3	2.4	4.9	2.4	2.4	2.4	2.3
CE. TEMP	349.0	328.3	329.9	319.1	313.3	303.8	304.0	304.7
UW. TEMP	336.8	320.8	322.2	314.2	309.7	302.7	302.8	303.3
LW. TEMP	316.1	308.2	308.7	304.9	303.4	301.0	301.0	301.2
FL. TEMP	324.8	312.7	313.9	307.9	305.5	301.7	301.8	302.0
PLUME	6.672E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.800E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	5.904E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	4.818E-03	7.084E-03	9.185E-03	1.449E-02	6.005E-03	1.372E-03	1.279E-03	8.602E-04
	2.561E-01	1.456E-01	1.530E-01	9.555E-02	6.165E-02	1.711E-02	1.754E-02	2.014E-02
QSCW	4.410E-01	3.018E-01	2.757E-01	1.685E-01	1.167E-01	2.997E-02	3.130E-02	3.862E-02
	-3.468E-02	-2.592E-02	-1.110E-02	-1.010E-02	-7.262E-03	1.283E-05	1.870E-06	-2.647E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.778E+05	1.790E+05	1.792E+05	1.799E+05	1.805E+05	1.965E+05	1.964E+05	1.955E+05
CO2 PPM	1.244E+04	1.191E+04	1.185E+04	1.152E+04	1.130E+04	4.478E+03	4.523E+03	4.903E+03
CO PPM	366.	351.	349.	339.	333.	132.	133.	144.
OD 1/M	0.720	0.758	0.756	0.784	0.797	0.338	0.341	0.367
CT GM/M3	41.3	41.9	42.9	42.8	41.6	17.0	17.3	19.0

TIME = 700.0 SECONDS.

U. TEMP	435.6	375.2	375.2	344.5	329.9	307.5	307.8	309.2
L. TEMP	335.7	319.5	315.8	310.3	305.7	301.8	301.8	302.1
UL. VOLUM	51.7	44.7	26.2	17.6	9.4	20.2	22.3	34.8
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	352.6	329.0	330.4	318.7	312.7	303.4	303.5	304.1
UW. TEMP	339.6	321.6	322.8	314.0	309.4	302.4	302.5	303.0
LW. TEMP	319.2	309.7	309.8	305.5	303.8	301.1	301.1	301.2
FL. TEMP	329.8	315.2	316.0	309.1	306.2	301.8	301.8	302.1
PLUME	2.974E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	4.971E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.631E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	5.509E-02	1.784E-02	2.033E-02	1.601E-02	6.223E-03	5.283E-04	4.449E-04	3.869E-05
QSCW	3.237E-01	1.516E-01	1.563E-01	9.006E-01	5.705E-02	1.277E-02	1.326E-02	1.541E-02
	7.313E-01	3.655E-01	3.513E-01	1.764E-01	1.058E-01	1.640E-02	1.704E-02	2.132E-02
	1.452E-03	9.924E-04	-1.702E-04	1.969E-04	-1.059E-03	-7.330E-08	2.659E-08	-3.038E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.711E+05	1.759E+05	1.757E+05	1.783E+05	1.796E+05	1.796E+05	1.970E+05	1.950E+05
CO2 PPM	1.528E+04	1.326E+04	1.334E+04	1.233E+04	1.173E+04	4.797E+03	4.809E+03	5.126E+03
CO PPM	450.	391.	393.	363.	346.	141.	142.	151.
OD 1/M	0.822	0.827	0.833	0.838	0.832	0.365	0.366	0.388
CT GM/M3	59.5	60.7	61.7	62.1	61.0	25.4	25.7	27.9



TIME = 800.0 SECONDS.

U. TEMP	580.6	452.3	448.5	385.4	356.6	306.8	307.0	308.0
L. TEMP	350.5	346.1	344.1	345.2	308.3	301.8	301.9	302.2
UL. VOLUM	51.8	44.6	26.1	17.6	9.4	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	386.5	344.5	345.2	325.8	316.5	303.2	303.3	303.9
UW. TEMP	364.9	332.8	333.5	319.1	312.1	302.3	302.4	302.8
LW. TEMP	332.7	316.4	316.1	310.4	304.8	301.1	301.1	301.3
FL. TEMP	352.1	323.1	323.5	312.7	308.0	301.8	301.9	302.2
PLUME	4.257E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.166E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	3.824E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	3.871E-01	1.062E-01	1.057E-01	5.313E-02	2.527E-02	5.279E-04	4.375E-04	2.421E-05
QSCW	9.404E-01	3.447E-01	3.379E-01	1.602E-01	9.558E-02	1.077E-02	1.112E-02	1.308E-02
	1.915E+00	1.020E+00	9.672E-01	5.094E-01	3.138E-01	1.371E-02	1.402E-02	1.627E-02
	-2.928E-03	8.710E-03	7.516E-03	1.380E-02	4.110E-05	-1.167E-07	-1.170E-07	-1.291E-07
UPPER LAYER SPECIES CONCENTRATION								
O2	1.486E+05	1.602E+05	1.610E+05	1.682E+05	1.727E+05	2.054E+05	2.048E+05	1.996E+05
CO2	2.493E+04	1.997E+04	1.975E+04	1.678E+04	1.510E+04	5.442E+03	5.439E+03	5.636E+03
CO	735.	588.	582.	494.	445.	160.	160.	166.
OD	1.01	1.03	1.03	1.02	0.991	0.415	0.415	0.428
CT	81.0	82.5	83.5	83.7	82.3	34.6	34.9	37.6



TIME = 900.0 SECONDS.

U. TEMP	701.2	526.0	517.3	430.9	390.9	307.9	307.9	308.3
L. TEMP	399.1	348.7	361.8	371.4	313.4	302.0	302.0	302.3
UL. VOLUM	51.8	44.7	26.2	17.6	9.4	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	442.8	372.5	371.4	340.8	326.5	303.3	303.4	303.9
UW. TEMP	410.0	353.8	353.2	330.2	319.3	302.4	302.4	302.8
LW. TEMP	366.3	328.0	327.6	317.9	307.6	301.1	301.2	301.4
FL. TEMP	406.5	341.5	340.8	320.8	312.5	302.0	302.0	302.3
PLUME	2.967E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.482E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.862E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	9.276E-01	2.321E-01	2.224E-01	1.046E-01	5.102E-02	1.190E-02	1.036E-03	3.947E-04
	1.865E+00	6.628E-01	6.265E-01	2.886E-01	1.753E-01	1.127E-02	1.143E-02	1.257E-02
QSCW	2.474E+00	1.486E+00	1.401E+00	8.246E-01	5.593E-01	1.885E-02	1.844E-02	1.787E-02
	-2.714E-02	1.867E-03	7.486E-03	2.385E-02	1.390E-04	-1.344E-07	-1.638E-07	-1.821E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.094E+05	1.268E+05	1.303E+05	1.441E+05	1.528E+05	2.094E+05	2.091E+05	2.049E+05
CO2 PPM	4.179E+04	3.429E+04	3.314E+04	2.778E+04	2.412E+04	6.353E+03	6.311E+03	6.383E+03
CO PPM	1.231E+03	1.010E+03	976.	819.	711.	187.	186.	188.
OD 1/M	1.40	1.53	1.50	1.51	1.44	0.483	0.480	0.485
CT GM/M3	109.	112.	113.	113.	111.	45.3	45.6	48.5

TIME = 1000.0 SECONDS.

U. TEMP	722.3	543.0	532.9	443.0	400.7	308.8	308.6	308.4
L. TEMP	438.6	354.3	368.4	375.6	317.9	302.1	302.2	302.5
UL. VOLUM	51.8	44.7	26.2	17.6	9.4	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	478.4	391.5	389.3	352.0	334.3	303.5	303.6	304.0
UW. TEMP	440.6	369.1	367.5	338.9	325.3	302.5	302.6	302.9
LW. TEMP	394.9	338.0	339.4	327.0	310.7	301.2	301.3	301.4
FL. TEMP	450.2	358.9	357.5	329.4	317.5	302.1	302.2	302.5
PLUME	2.710E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.447E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.746E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.014E+00	2.476E-01	2.376E-01	1.140E-01	5.392E-02	1.547E-03	1.339E-03	4.799E-04
QSCW	1.977E+00	7.684E-01	7.191E-01	3.409E-01	2.116E-01	1.216E-02	1.211E-02	1.240E-02
	2.227E+00	1.423E+00	1.340E+00	8.187E-01	5.716E-01	2.260E-02	2.151E-02	1.812E-02
	-4.824E-02	-1.644E-02	3.082E-03	2.092E-03	5.472E-05	7.475E-08	9.032E-09	-1.422E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	7.525E+04	9.163E+04	9.831E+04	1.149E+05	1.275E+05	2.073E+05	2.074E+05	2.048E+05
CO2 PPM	5.688E+04	4.968E+04	4.755E+04	4.125E+04	3.616E+04	7.511E+03	7.384E+03	7.162E+03
CO PPM	1.676E+03	1.464E+03	1.401E+03	1.215E+03	1.065E+03	221.	218.	211.
OD 1/M	1.84	2.14	2.09	2.18	2.11	0.570	0.560	0.544
CT GM/M3	148.	156.	156.	157.	153.	57.8	57.9	60.7

TIME = 1100.0 SECONDS.

U. TEMP	587.8	497.9	485.5	422.6	386.9	311.2	310.8	309.5
L. TEMP	377.9	322.9	344.7	319.0	312.7	310.8	310.3	308.2
UL. VOLUM	49.8	42.6	25.9	17.6	9.2	20.1	22.2	35.1
UL. THICK	2.3	2.3	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	473.8	396.5	393.2	356.2	337.2	303.9	304.0	304.2
UW. TEMP	438.5	373.8	371.4	342.6	327.7	302.8	302.9	303.0
LW. TEMP	397.2	341.9	342.6	325.9	312.3	301.9	301.8	301.8
FL. TEMP	442.0	360.1	362.2	331.4	319.2	302.4	302.5	302.7
PLUME	1.395E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	4.600E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.509E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.764E-01	8.449E-02	9.351E-02	7.122E-02	3.108E-02	2.678E-03	2.351E-03	9.984E-04
	1.012E+00	5.925E-01	5.476E-01	3.067E-01	1.873E-01	1.438E-02	1.401E-02	1.298E-02
QSCW	8.985E-01	8.691E-01	7.775E-01	5.498E-01	3.956E-01	3.471E-02	3.216E-02	2.295E-02
	-5.396E-01	-2.928E-01	-1.031E-01	-6.847E-02	-2.994E-02	2.398E-03	2.193E-03	1.406E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	7.952E+04	7.486E+04	8.559E+04	9.843E+04	1.165E+05	2.008E+05	2.015E+05	2.013E+05
CO2	PPM	5.537E+04	5.725E+04	5.322E+04	4.828E+04	4.142E+04	9.981E+03	9.635E+03	8.595E+03
CO	PPM	1.631E+03	1.687E+03	1.568E+03	1.423E+03	1.221E+03	294.	284.	253.
OD	1/M	2.21	2.69	2.57	2.68	2.51	0.751	0.726	0.650
CT	GM/M3	197.	214.	212.	216.	208.	73.2	73.0	74.8

TIME = 1200.0 SECONDS.

U. TEMP	522.7	450.3	443.6	396.5	370.7	310.3	310.1	309.0
L. TEMP	406.4	344.5	356.4	326.9	312.0	304.5	304.3	303.7
UL. VOLUM	51.3	44.2	26.2	17.6	9.3	20.2	22.2	35.2
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	451.3	387.6	385.3	353.1	336.0	304.3	304.3	304.4
UW. TEMP	420.6	367.5	365.9	340.7	327.2	303.1	303.1	303.1
LW. TEMP	389.0	341.7	342.4	326.5	313.5	301.8	301.8	301.9
FL. TEMP	427.4	359.2	362.2	333.8	320.9	302.6	302.7	302.8
PLUME	5.664E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	3.850E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.263E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	5.141E-02	1.649E-02	3.444E-02	3.808E-02	1.609E-02	1.783E-03	1.556E-03	5.340E-04
QSCW	6.382E-01	4.284E-01	3.703E-01	2.305E-01	1.542E-01	1.435E-02	1.400E-02	1.281E-02
	5.182E-01	4.852E-01	4.439E-01	3.221E-01	2.498E-01	2.746E-02	2.583E-02	1.914E-02
	-1.167E-01	-8.178E-02	-2.290E-02	-3.090E-02	-4.523E-02	3.254E-04	2.797E-04	1.203E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.111E+04	8.719E+04	9.484E+04	1.002E+05	1.092E+05	1.963E+05	1.974E+05	1.987E+05
CO2 PPM	5.055E+04	5.212E+04	4.943E+04	4.794E+04	4.445E+04	1.208E+04	1.157E+04	9.901E+03
CO PPM	1.489E+03	1.536E+03	1.456E+03	1.412E+03	1.310E+03	356.	341.	292.
OD 1/M	2.26	2.71	2.61	2.83	2.81	0.911	0.874	0.750
CT GM/M3	249.	279.	274.	282.	272.	93.3	92.3	91.6



TIME = 1300.0 SECONDS.

U. TEMP	501.4	437.7	431.4	388.7	365.5	309.6	309.4	308.5
L. TEMP	400.3	342.0	359.0	340.9	322.7	302.8	302.8	302.9
UL. VOLUM	51.4	44.2	26.2	17.6	9.4	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	443.7	384.7	382.5	351.9	335.3	304.4	304.4	304.4
UW. TEMP	413.9	365.3	363.8	339.9	326.7	303.2	303.2	303.2
LW. TEMP	386.7	342.3	342.6	326.5	314.3	301.9	301.9	302.0
FL. TEMP	421.3	359.0	361.6	334.3	321.8	302.8	302.8	302.9
PLUME	4.255E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	3.100E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.017E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.877E-02	5.283E-03	2.183E-02	3.009E-02	1.282E-02	1.301E-03	1.112E-03	2.296E-04
	5.390E-01	3.709E-01	3.194E-01	2.049E-01	1.388E-01	1.359E-02	1.328E-02	1.216E-02
QSCW	4.002E-01	3.939E-01	3.569E-01	2.621E-01	2.089E-01	2.266E-02	2.142E-02	1.600E-02
	-1.190E-01	-9.987E-02	-7.988E-03	1.597E-03	1.148E-04	3.789E-09	-1.158E-09	-1.061E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	8.904E+04	8.892E+04	9.426E+04	1.009E+05	1.095E+05	1.922E+05	1.936E+05	1.964E+05
CO2 PPM	5.165E+04	5.158E+04	4.977E+04	4.751E+04	4.423E+04	1.403E+04	1.338E+04	1.113E+04
CO PPM	1.522E+03	1.520E+03	1.466E+03	1.400E+03	1.303E+03	413.	394.	328.
OD 1/M	2.41	2.76	2.70	2.86	2.83	1.06	1.01	0.845
CT GM/M3	305.	344.	337.	349.	338.	117.	115.	111.



TIME = 1400.0 SECONDS.

U. TEMP	481.0	426.6	420.3	381.7	359.6	309.2	308.9	308.0
L. TEMP	396.2	341.3	358.2	332.6	324.1	302.9	303.0	303.4
UL. VOLUM	51.3	44.2	26.1	17.6	9.3	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	438.6	383.1	380.9	351.4	335.0	304.4	304.4	304.4
UW. TEMP	408.7	363.8	362.3	339.5	326.5	303.2	303.2	303.2
LW. TEMP	385.9	343.1	343.1	326.8	314.7	302.1	302.1	302.1
FL. TEMP	416.0	358.9	360.8	334.3	322.0	302.9	302.9	303.0
PLUME	4.068E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.350E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	7.708E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-2.101E-02	-7.407E-03	7.284E-03	2.203E-02	7.467E-03	1.055E-03	8.719E-04	3.043E-05
	4.773E-01	3.341E-01	2.875E-01	1.897E-01	1.273E-01	1.276E-02	1.248E-02	1.143E-02
QSCW	2.720E-01	3.071E-01	2.712E-01	2.042E-01	1.607E-01	1.972E-02	1.856E-02	1.359E-02
	-1.107E-01	-1.040E-01	-7.965E-03	-4.510E-03	3.931E-04	2.123E-06	3.051E-06	4.402E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	8.983E+04	8.941E+04	9.444E+04	1.014E+05	1.124E+05	1.880E+05	1.898E+05	1.938E+05
CO2 PPM	5.146E+04	5.154E+04	4.982E+04	4.728E+04	4.323E+04	1.567E+04	1.491E+04	1.217E+04
CO PPM	1.516E+03	1.519E+03	1.468E+03	1.393E+03	1.274E+03	462.	439.	359.
OD 1/M	2.51	2.83	2.78	2.90	2.81	1.19	1.13	0.925
CT GM/M3	364.	411.	403.	418.	406.	144.	140.	132.

TIME = 1500.0 SECONDS.

U. TEMP	459.9	415.0	409.0	374.9	354.3	308.5	308.3	307.5
L. TEMP	391.9	343.6	350.2	324.9	315.0	306.6	306.4	305.4
UL. VOLUM	51.2	44.2	26.1	17.6	9.3	20.1	22.2	35.2
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	433.7	381.5	379.3	350.9	334.9	304.4	304.4	304.4
UW. TEMP	403.4	362.1	360.7	339.0	326.3	303.2	303.2	303.2
LW. TEMP	385.4	343.9	343.6	327.2	315.3	302.2	302.2	302.2
FL. TEMP	410.7	358.1	359.7	334.2	321.9	303.0	303.0	303.1
PLUME	3.294E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.600E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	5.248E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-5.849E-02	-2.112E-02	-6.833E-03	1.453E-02	2.387E-03	7.088E-04	5.435E-04	-2.213E-04
	4.272E-01	3.051E-01	2.593E-01	1.730E-01	1.160E-01	1.178E-02	1.154E-02	1.065E-02
QSCW	1.464E-01	2.202E-01	1.882E-01	1.507E-01	1.186E-01	1.611E-02	1.516E-02	1.108E-02
	-1.036E-01	-7.998E-02	-4.579E-02	-4.584E-02	-3.202E-02	7.817E-04	7.212E-04	4.501E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.254E+04	9.113E+04	9.601E+04	1.021E+05	1.138E+05	1.850E+05	1.870E+05	1.921E+05
CO2 PPM	5.043E+04	5.093E+04	4.927E+04	4.713E+04	4.284E+04	1.704E+04	1.618E+04	1.307E+04
CO PPM	1.486E+03	1.501E+03	1.452E+03	1.389E+03	1.262E+03	502.	477.	385.
OD 1/M	2.57	2.87	2.82	2.94	2.83	1.29	1.23	0.995
CT GM/M3	424.	479.	469.	488.	474.	173.	168.	155.

TIME = 1600.0 SECONDS.

U. TEMP	441.0	404.2	398.7	369.4	351.9	307.9	307.7	307.1
L. TEMP	387.8	340.4	356.6	331.9	316.9	304.2	304.0	303.6
UL. VOLUM	50.8	44.0	26.2	17.6	9.3	20.2	22.3	35.3
UL. THICK	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	429.0	379.6	377.6	350.4	334.8	304.5	304.5	304.5
UW. TEMP	397.7	360.1	358.8	338.3	326.1	303.2	303.2	303.2
LW. TEMP	384.7	344.4	344.5	328.0	316.1	302.2	302.2	302.2
FL. TEMP	404.9	356.0	359.4	335.2	322.9	303.1	303.1	303.1
PLUME	3.049E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.067E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	3.499E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-8.868E-02	-3.499E-02	-1.574E-02	9.828E-03	1.484E-03	3.382E-04	2.030E-04	-4.432E-04
	3.913E-01	2.841E-01	2.324E-01	1.585E-01	1.096E-01	1.117E-02	1.096E-02	1.020E-02
QSCW	5.306E-02	1.474E-01	1.213E-01	1.115E-01	1.006E-01	1.280E-02	1.211E-02	8.998E-03
	-9.203E-02	-8.902E-02	-8.776E-03	-1.167E-02	-2.652E-02	1.612E-04	1.383E-04	5.898E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.653E+04	9.368E+04	9.855E+04	1.034E+05	1.114E+05	1.823E+05	1.846E+05	1.905E+05
CO2 PPM	4.880E+04	4.994E+04	4.827E+04	4.677E+04	4.375E+04	1.827E+04	1.735E+04	1.393E+04
CO PPM	1.438E+03	1.471E+03	1.422E+03	1.378E+03	1.289E+03	538.	511.	410.
OD 1/M	2.59	2.89	2.84	2.97	2.91	1.39	1.32	1.06
CT GM/M3	486.	548.	537.	558.	542.	205.	199.	179.

TIME = 1700.0 SECONDS.

U. TEMP	422.6	394.1	388.6	363.2	347.5	307.8	307.6	306.9
L. TEMP	381.3	335.9	356.3	334.8	328.2	303.1	303.1	303.2
UL. VOLUM	50.3	43.7	26.2	17.6	9.4	20.2	22.3	35.3
UL. THICK	2.3	2.3	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	424.5	377.7	375.7	349.6	334.2	304.5	304.5	304.5
UW. TEMP	391.9	357.9	356.6	337.4	325.6	303.3	303.2	303.2
LW. TEMP	384.1	344.7	344.7	328.2	316.7	302.3	302.3	302.3
FL. TEMP	399.5	354.2	357.8	334.7	322.9	303.1	303.1	303.2
PLUME	2.258E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	5.333E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	1.749E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.145E-01	-4.536E-02	-2.568E-02	4.140E-03	-1.668E-03	2.602E-04	1.241E-04	-5.191E-04
QSCW	3.580E-01	2.619E-01	2.129E-01	1.484E-01	1.027E-01	1.085E-02	1.064E-02	9.850E-03
	-2.909E-04	8.747E-02	6.378E-02	7.256E-02	7.213E-02	1.186E-02	1.116E-02	8.065E-03
	-1.013E-01	-1.117E-01	-3.896E-03	7.056E-06	1.268E-03	9.276E-08	9.636E-08	3.832E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.001E+05	9.652E+04	1.015E+05	1.064E+05	1.152E+05	1.791E+05	1.816E+05	1.884E+05
CO2	PPM	4.737E+04	4.882E+04	4.710E+04	4.548E+04	4.231E+04	1.957E+04	1.857E+04	1.480E+04
CO	PPM	1.396E+03	1.438E+03	1.388E+03	1.340E+03	1.247E+03	577.	547.	436.
OD	1/M	2.63	2.90	2.84	2.93	2.85	1.49	1.41	1.13
CT	GM/M3	548.	617.	604.	628.	610.	239.	231.	205.



TIME = 1800.0 SECONDS.

U. TEMP	401.5	383.3	377.6	356.7	342.4	307.4	307.3	306.6
L. TEMP	375.8	333.5	350.7	328.0	317.6	305.2	305.3	305.2
UL. VOLUM	49.2	43.3	26.1	17.6	9.3	20.2	22.3	35.2
UL. THICK	2.3	2.3	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	421.0	375.5	373.6	348.6	333.7	304.5	304.5	304.5
UW. TEMP	385.4	355.3	354.1	336.3	325.0	303.3	303.2	303.2
LW. TEMP	383.2	344.7	344.6	328.3	316.7	302.5	302.4	302.4
FL. TEMP	394.1	352.0	355.7	333.7	322.2	303.2	303.2	303.2
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.467E-01	-5.580E-02	-3.628E-02	-1.768E-03	-6.023E-03	9.746E-05	-3.304E-05	-6.494E-04
QSCW	3.303E-01	2.402E-01	1.941E-01	1.378E-01	9.579E-02	1.030E-02	1.009E-02	9.365E-03
	-6.122E-03	3.279E-02	1.316E-02	3.603E-02	4.125E-02	1.020E-02	9.567E-03	6.785E-03
	-1.029E-01	-1.140E-01	-1.961E-02	-2.353E-02	-1.836E-02	3.545E-04	3.758E-04	3.711E-04
O2 PPM	1.041E+05	9.964E+04	1.047E+05	1.093E+05	1.093E+05	1.195E+05	1.764E+05	1.866E+05
CO2 PPM	4.573E+04	4.755E+04	4.587E+04	4.437E+04	4.080E+04	2.056E+04	1.952E+04	1.550E+04
CO PPM	1.347E+03	1.401E+03	1.352E+03	1.307E+03	1.202E+03	606.	575.	457.
OD 1/M	2.67	2.91	2.85	2.91	2.79	1.57	1.49	1.18
CT GM/M3	611.	686.	672.	698.	677.	276.	266.	233.

UPPER LAYER SPECIES CONCENTRATION



INPUT FAST FILE : SYS:TH3.DMP/G  
INPUT EXITT FILE : SCENFIV.EVA  
TENABS OUTPUT FILE: SCENFIV.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	8	0
	5	219
	6	224
	5	229
	4	233
	3	236
	9	238

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	8	0
	5	219
	7	223
	5	235
	4	240
	3	245
	9	246

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	7	0
	5	235
	4	240
	3	245
	9	246

OCCUPANT 4	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	229
	4	233
	3	236
	9	238

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1	TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
	4.	OUT	ESCAPE		27.0	0.0	0.00	0.
	31.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 2

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
31.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 3

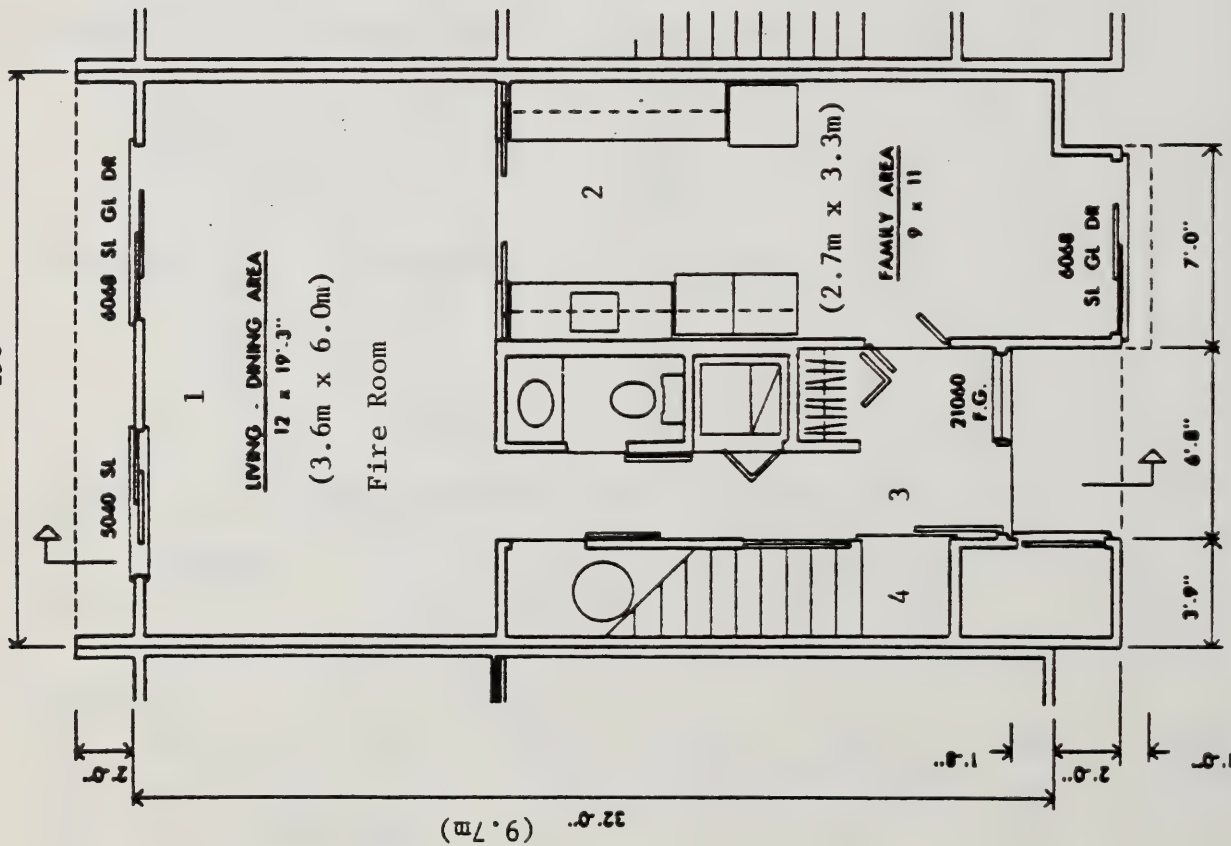
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
31.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 4

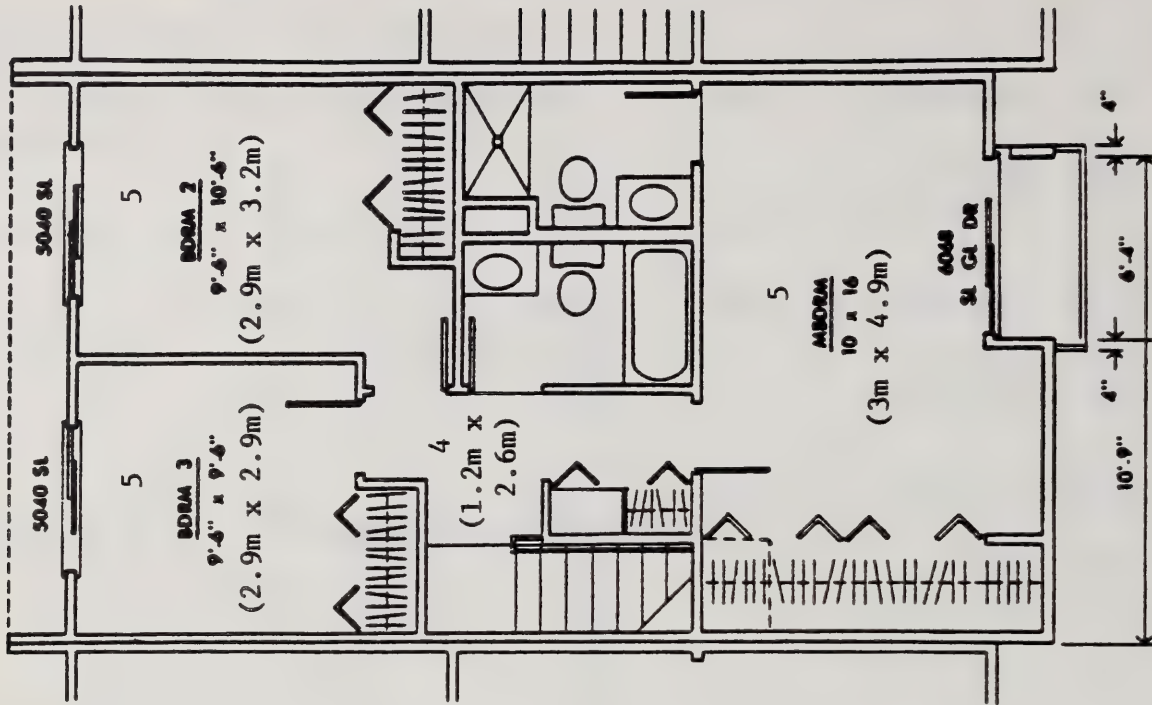
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
31.	OUT	FINAL TIME		27.0	0.0	0.00	0.

(6.1m)

20'-0"



G - Floor Plan for FIRE #5  
(5 Compartments)



LOWER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

NBS

UPPER FLOOR PLAN OF A TYPICAL TOWNHOUSE

AUG. 10, 1977

NBS

VERSN	017	TOWN HOUSE-X-5													
TIMES	1850	100	0	0	0	0	0	0	0	0	0	0	0	0	
NROOM	5														
NMXOP	1														
TAMB	300														
HI/F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	
WIDTH	6.0	2.7	2.1	1.2	4.0										
DEPTH	3.6	6.9	5.2	6.3	8.1										
HEIGH	2.4	2.4	2.4	4.9	2.4										
HVENT	1	2	1.1	2.1	0.0										
HVENT	1	3	1.1	2.1	0.0										
HVENT	2	6	1.1	0.2	0.0										
HVENT	3	4	1.1	2.1	0.0										
HVENT	4	5	.03	4.8	2.7										
CEILI															
COND	.00018	.00018	.00018	.00018	.00018	.00018									
SPHT	.9	.9	.9	.9	.9										
DNSTY	790	790	790	790	790										
THICK	.016	.016	.016	.016	.016	.016									
EMISS	.9	.9	.9	.9	.9										
WALLS															
COND	.00018	.00018	.00018	.00018	.00018	.00018									
SPHT	.9	.9	.9	.9	.9										
DNSTY	790	790	790	790	790										
THICK	.016	.016	.016	.016	.016	.016									
EMISS	.9	.9	.9	.9	.9										
FLOOR															
COND	.0001	.0001	.0001	.0001	.0001	.0001									
SPHT	1.4	1.4	1.4	1.4	1.4										
DNSTY	300	300	300	300	300										
THICK	.0127	.0127	.0127	.0127	.0127	.0127									
EMISS	1.0	1.0	1.0	1.0	1.0										
LFBO	1														
LFBT	1														
LFPOS	1														
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	32800	300							
LFMAX	12														
FTIME	320	30	50	50	50	150	75	175	170	80	400	300			
FMASS	0.0	.002	.002	.0005	.0001	.0025	.0018	.0033	.015	.0144	.0046	.0016			
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
FAREA	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5			
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	
O2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	
CT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	





I. OUTPUT - COMPUTER FILE FOR FIRE #5 (5 Compartments)

## TOWN HOUSE-X-5

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	6.0	2.7	2.1	1.2	4.0
DEPTH	3.6	6.9	5.2	6.3	8.1
HEIGHT	2.4	2.4	2.4	4.9	2.4
AREA	21.6	18.6	10.9	7.6	32.4
VOLUME	51.8	44.7	26.2	37.0	77.8
CEILING	2.4	2.4	2.4	4.9	5.1
FLOOR	0.0	0.0	0.0	0.0	2.7

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00
	HH=	0.00	2.10	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	2.10	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	0.00	0.00	0.00	1.10
	HH=	2.10	0.00	0.00	0.00	0.00	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	0.00	0.00	0.00	0.00	0.20
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	0.00	0.00	1.10	0.00	0.00
	HH=	2.10	0.00	0.00	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	0.00	0.00	2.10	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	1.10	0.00	0.03	0.00
	HH=	0.00	0.00	2.10	0.00	4.80	0.00
	HL=	0.00	0.00	0.00	0.00	2.70	0.00
	HHP=	0.00	0.00	2.10	0.00	4.80	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00
5 ( 1 )	BW=	0.00	0.00	0.00	0.03	0.00	0.00
	HH=	0.00	0.00	0.00	4.80	0.00	0.00
	HL=	0.00	0.00	0.00	2.70	0.00	0.00
	HHP=	0.00	0.00	0.00	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

## FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02

THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 1  
TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 12  
TOTAL TIME INTERVAL = 1850  
FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 32800.

FMASS=	0.00E+00	2.00E-03	2.00E-03	5.00E-04	1.00E-04	2.50E-03	1.80E-03	3.30E-03	1.50E-02	1.44E-02	4.60E-03	1.60E-03	0.0
FHIGH=	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
0E+00	02=	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.
5	CO2=	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.
6	CO=	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.0
0E-02	OD=	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.0
0E-02	CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.
0	FTIME=	3.20E+02	30.	50.	50.	50.	50.	1.75E+02	1.70E+02	80	4.00E+02	3.00E+02	

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	320.4	304.6	305.7	300.1	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	27.2	15.3	11.0	10.5	0.0
UL. THICK	1.3	0.8	1.0	1.4	0.0
CE. TEMP	301.9	300.2	300.3	300.0	300.0
UW. TEMP	301.2	300.1	300.2	300.0	300.0
LW. TEMP	300.2	300.0	300.0	300.0	300.0
FL. TEMP	300.3	300.0	300.0	300.0	300.0
PLUME	3.31E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	6.250E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	2.050E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	8.097E-03	2.096E-03	2.740E-03	3.645E-05	-6.345E-07
	1.142E-02	1.518E-03	1.785E-03	5.719E-06	3.724E-07
QSCW	1.197E-01	1.797E-02	2.398E-02	6.365E-05	3.941E-08
	-4.243E-04	-1.894E-05	-2.218E-05	2.473E-09	-9.912E-06

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.050E+05	2.064E+05	2.063E+05	2.070E+05	2.070E+05
CO2 PPM	844.	239.	294.	3.67	0.996
CO PPM	24.9	7.03	8.66	0.108	2.933E-02
OD 1/M	6.168E-02	1.835E-02	2.253E-02	2.866E-04	7.769E-05
CT GM/M3	0.639	0.119	0.137	9.273E-04	1.630E-04



TIME = 200.0 SECONDS.

U. TEMP	344.1	314.6	318.4	303.2	300.0
L. TEMP	300.1	300.0	300.0	300.0	300.0
UL. VOLUM	30.9	32.7	16.3	30.8	16.7
UL. THICK	1.4	1.8	1.5	4.1	0.5
CE. TEMP	307.4	301.7	302.2	300.2	300.0
UW. TEMP	305.0	301.1	301.5	300.1	300.0
LW. TEMP	300.8	300.2	300.2	300.0	300.0
FL. TEMP	301.3	300.3	300.3	300.0	300.0
PLUME	2.878E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.250E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.272E-02	5.622E-03	7.302E-03	1.739E-03	1.193E-05
QSCW	3.682E-02	1.050E-02	1.040E-02	1.110E-03	8.177E-06
	2.852E-01	7.471E-02	1.009E-01	1.089E-02	1.825E-05
	-3.102E-03	-4.797E-04	-4.977E-04	-1.472E-05	-8.751E-06

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.020E+05	2.047E+05	2.042E+05	2.065E+05	2.070E+05
CO2	PPM	2.123E+03	968.	1.180E+03	231.	3.54
CO	PPM	62.6	28.5	34.8	6.80	0.104
OD	1/M	0.144	7.207E-02	8.678E-02	1.782E-02	2.764E-04
CT	GM/M3	3.16	1.20	1.37	0.148	1.338E-02

TIME = 300.0 SECONDS.

U. TEMP	352.4	324.3	324.0	308.1	300.4
L. TEMP	300.9	300.6	300.3	300.1	300.0
UL. VOLUM	44.6	43.4	24.7	36.7	20.6
UL. THICK	2.1	2.3	2.3	4.9	0.6
CE. TEMP	312.1	304.0	304.3	300.9	300.0
UW. TEMP	308.4	302.7	303.0	300.6	300.0
LW. TEMP	301.9	300.7	300.6	300.1	300.0
FL. TEMP	303.1	301.2	301.1	300.2	300.0
PLUME	1.431E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.875E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	6.150E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.416E-02	9.199E-03	8.969E-03	4.214E-03	1.670E-04
QSCW	7.241E-02	3.060E-02	2.935E-02	8.064E-03	1.254E-04
	3.188E-01	1.343E-01	1.284E-01	3.487E-02	6.297E-04
	-7.098E-03	-1.047E-03	-1.719E-03	-2.286E-04	-9.811E-06

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.004E+05	2.026E+05	2.029E+05	2.051E+05	2.069E+05
CO2	PPM	2.824E+03	1.861E+03	1.751E+03	789.	40.5
CO	PPM	83.2	54.8	51.6	23.3	1.19
OD	1/M	0.188	0.134	0.127	5.998E-02	3.154E-03
CT	GM/M3	7.15	3.66	3.94	1.06	4.648E-02

TIME = 400.0 SECONDS.

U. TEMP	353.4	331.3	331.1	313.6	302.3
L. TEMP	302.2	301.1	300.4	300.0	300.0
UL. VOLUM	48.3	44.1	24.3	35.1	35.5
UL. THICK	2.2	2.4	2.2	4.6	1.1
CE. TEMP	316.1	306.9	306.9	302.0	300.1
UW. TEMP	311.4	304.8	304.9	301.4	300.1
LW. TEMP	303.4	301.5	301.3	300.3	300.0
FL. TEMP	305.6	302.5	302.2	300.6	300.0
PLUME	3.430E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	5.000E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.640E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	9.558E-03	1.030E-02	1.051E-02	6.718E-03	9.813E-04
QSCW	9.107E-02	4.522E-02	3.986E-02	1.130E-02	1.003E-03
	2.848E-01	1.697E-01	1.669E-01	6.468E-02	6.950E-03
	-1.272E-02	-3.908E-03	-5.530E-03	-1.104E-03	-3.052E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.985E+05	2.004E+05	2.008E+05	2.033E+05	2.063E+05
CO2 PPM	3.632E+03	2.810E+03	2.653E+03	1.564E+03	306.
CO PPM	107.	82.8	78.2	46.1	9.03
OD 1/M	0.241	0.199	0.188	0.117	2.373E-02
CT GM/M3	12.4	7.67	7.68	3.13	0.287

TIME = 500.0 SECONDS.

U. TEMP	357.9	325.9	328.9	313.1	304.2
L. TEMP	302.0	302.1	300.4	300.1	300.0
UL. VOLUM	43.3	43.3	22.3	33.5	54.4
UL. THICK	2.0	2.3	2.0	4.4	1.7
CE. TEMP	316.4	307.2	307.6	302.8	300.4
UW. TEMP	311.8	305.1	305.4	301.9	300.3
LW. TEMP	303.8	301.8	301.5	300.4	300.1
FL. TEMP	305.9	302.9	302.4	300.7	300.1
PLUME	1.972E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.500E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	8.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.246E-02	5.810E-03	7.189E-03	5.506E-03	1.492E-03
	8.001E-02	3.865E-02	3.331E-02	1.034E-02	2.936E-03
QSCW	3.276E-01	1.192E-01	1.410E-01	5.524E-02	1.486E-02
	-1.540E-02	-1.764E-03	-6.248E-03	-1.382E-03	-1.396E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.976E+05	1.996E+05	1.994E+05	2.018E+05	2.050E+05
CO2 PPM	4.017E+03	3.163E+03	3.223E+03	2.214E+03	828.
CO PPM	118.	93.2	95.0	65.2	24.4
OD 1/M	0.263	0.227	0.229	0.166	6.374E-02
CT GM/M3	18.2	12.7	12.6	6.52	1.36

TIME = 600.0 SECONDS.

U. TEMP	373.5	340.6	340.5	319.0	304.5
L. TEMP	303.6	305.8	301.0	300.2	300.0
UL. VOLUM	47.3	44.5	24.6	36.0	66.5
UL. THICK	2.2	2.4	2.3	4.8	2.1
CE. TEMP	322.9	310.5	310.9	304.0	300.7
UW. TEMP	316.5	307.4	307.7	302.8	300.5
LW. TEMP	305.4	302.7	302.3	300.7	300.1
FL. TEMP	308.5	304.5	303.6	301.2	300.2
PLUME	1.172E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.033E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	6.669E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.652E-02	1.286E-02	1.213E-02	8.575E-03	1.401E-03
	1.283E-01	6.295E-02	5.958E-02	2.224E-02	4.168E-03
QSCW	4.156E-01	2.200E-01	2.154E-01	9.027E-02	1.524E-02
	-2.064E-02	2.038E-04	-9.094E-03	-2.414E-03	-2.436E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.951E+05	1.972E+05	1.974E+05	1.997E+05	2.043E+05
CO2 PPM	5.071E+03	4.170E+03	4.090E+03	3.115E+03	1.154E+03
CO PPM	149.	123.	121.	91.8	34.0
OD 1/M	0.318	0.287	0.281	0.229	8.872E-02
CT GM/M3	25.1	18.8	18.7	11.2	3.21



TIME = 700.0 SECONDS.

U. TEMP	384.1	345.5	344.3	321.3	304.1
L. TEMP	308.6	307.3	303.0	300.8	300.1
UL. VOLUM	50.5	44.7	25.9	36.8	71.4
UL. THICK	2.3	2.4	2.4	4.9	2.2
CE. TEMP	327.4	313.1	313.2	305.2	300.8
UW. TEMP	319.9	309.4	309.5	303.7	300.5
LW. TEMP	307.4	303.7	303.3	301.2	300.2
FL. TEMP	311.8	306.1	305.2	301.9	300.3
PLUME	7.419E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.800E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	9.184E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.367E-02	1.351E-02	1.323E-02	9.211E-03	1.072E-03
	1.658E-01	7.422E-02	7.599E-02	3.086E-02	4.339E-03
QSCW	4.768E-01	2.403E-01	2.289E-01	9.846E-02	1.240E-02
	-1.142E-02	1.800E-04	-7.079E-03	-2.784E-03	-2.259E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.920E+05	1.948E+05	1.952E+05	1.977E+05	2.039E+05
CO2	PPM	/	6.406E+03	5.173E+03	5.015E+03	3.948E+03	1.317E+03
CO	PPM	/	189.	152.	148.	116.	38.8
OD	1/M	/	0.390	0.351	0.341	0.288	0.101
CT	GM/M3	/	33.4	26.4	26.1	17.4	5.48

TIME = 800.0 SECONDS.

U. TEMP	477.1	392.2	385.5	338.7	304.0
L. TEMP	318.2	324.9	306.1	302.0	300.3
UL. VOLUM	51.6	44.6	26.1	36.9	75.2
UL. THICK	2.4	2.4	2.4	4.9	2.3
CE. TEMP	346.2	321.6	320.8	308.1	300.8
UW. TEMP	333.6	315.5	314.9	305.8	300.6
LW. TEMP	313.1	306.6	305.2	301.9	300.2
FL. TEMP	321.5	309.7	308.5	303.1	300.4
PLUME	7.257E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	8.314E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	2.727E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.458E-01	4.944E-02	4.505E-02	2.038E-02	1.044E-03
	4.273E-01	1.611E-01	1.521E-01	5.567E-02	4.537E-03
QSCW	1.282E+00	6.331E-01	5.692E-01	2.263E-01	1.172E-02
	-1.088E-02	5.215E-03	-7.806E-03	-2.897E-03	-1.274E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.797E+05	1.869E+05	1.880E+05	1.933E+05	2.035E+05
CO2	PPM	1.161E+04	8.541E+03	8.056E+03	5.845E+03	1.489E+03
CO	PPM	342.	252.	237.	172.	43.9
OD	1/M	0.570	0.510	0.489	0.404	0.115
CT	GM/M3	44.6	36.3	35.7	25.4	8.04

TIME = 900.0 SECONDS.

U. TEMP	642.2	487.3	468.7	386.5	305.6
L. TEMP	351.0	339.7	332.1	334.9	300.5
UL. VOLUM	51.8	44.6	26.1	37.0	77.8
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	396.3	347.1	342.9	318.8	301.1
UW. TEMP	371.8	334.0	331.0	313.3	300.7
LW. TEMP	334.8	315.8	312.0	305.5	300.3
FL. TEMP	357.3	322.4	319.2	307.4	300.5
PLUME	4.495E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.500E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.920E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	6.581E-01	1.755E-01	1.481E-01	5.987E-02	1.734E-03
QSCW	1.353E+00	4.596E-01	3.975E-01	1.505E-01	6.284E-03
	2.474E+00	1.388E+00	1.230E+00	6.042E-01	1.879E-02
	-2.257E-02	6.079E-03	4.146E-03	1.129E-02	-2.189E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.495E+05	1.636E+05	1.677E+05	1.787E+05	2.069E+05
CO2 PPM	2.449E+04	1.847E+04	1.670E+04	1.206E+04	1.905E+03
CO PPM	722.	544.	492.	355.	56.1
OD 1/M	0.893	0.888	0.834	0.731	0.146
CT GM/M3	61.7	52.5	51.0	38.4	11.1

TIME = 1000.0 SECONDS.

U. TEMP	696.1	525.7	507.6	415.3	307.4
L. TEMP	400.8	340.4	334.7	325.2	300.7
UL. VOLUM	51.8	44.7	26.2	37.0	77.8
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	443.7	372.2	366.0	332.1	301.4
UW. TEMP	410.9	353.5	348.8	323.2	301.0
LW. TEMP	367.1	326.7	322.6	311.1	300.4
FL. TEMP	408.8	341.1	335.8	314.4	300.7
PLUME	2.000E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.465E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.804E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	8.925E-01	2.308E-01	2.034E-01	8.618E-02	2.264E-03
	1.805E+00	6.637E-01	5.862E-01	2.414E-01	8.478E-03
QSCW	2.406E+00	1.484E+00	1.363E+00	7.592E-01	2.697E-02
	-2.290E-02	-9.472E-04	-2.391E-03	3.306E-03	-2.788E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.144E+05	1.300E+05	1.376E+05	1.534E+05	2.088E+05
CO2 PPM	3.946E+04	3.278E+04	2.957E+04	2.297E+04	2.579E+03
CO PPM	1.163E+03	966.	871.	677.	76.0
OD 1/M	1.33	1.46	1.36	1.30	0.196
CT GM/M3	88.2	80.4	77.1	62.2	15.1

TIME = 1100.0 SECONDS.

U. TEMP	672.7	527.4	508.9	421.6	308.6
L. TEMP	400.1	330.6	337.0	312.8	301.6
UL. VOLUM	51.6	44.2	26.1	36.9	77.5
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	468.4	387.4	380.1	341.0	301.9
UW. TEMP	432.8	365.9	360.3	330.3	301.3
LW. TEMP	387.9	335.1	330.6	314.1	300.6
FL. TEMP	438.7	354.0	348.7	320.3	300.9
PLUME	8.377E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.072E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	3.518E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	6.744E-01	2.011E-01	1.808E-01	8.601E-02	2.391E-03
QSCW	1.558E+00	6.924E-01	6.127E-01	2.722E-01	1.020E-02
	1.830E+00	1.302E+00	1.192E+00	7.181E-01	3.169E-02
	-2.659E-01	-1.552E-01	-6.097E-02	-3.597E-02	7.871E-05

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	8.986E+04	9.979E+04	1.102E+05	1.267E+05	2.069E+05
CO2 PPM	4.999E+04	4.571E+04	4.140E+04	3.452E+04	3.545E+03
CO PPM	1.473E+03	1.347E+03	1.220E+03	1.017E+03	104.
OD 1/M	1.74	2.03	1.91	1.92	0.269
CT GM/M3	125.	122.	116.	101.	20.7



TIME = 1200.0 SECONDS.

U. TEMP	522.6	452.0	442.3	391.2	309.0
L. TEMP	376.5	329.7	348.1	317.7	303.7
UL. VOLUM	49.8	43.3	26.2	37.0	77.7
UL. THICK	2.3	2.3	2.4	4.9	2.4
CE. TEMP	441.9	380.7	374.8	341.2	302.2
UW. TEMP	412.8	361.7	357.3	331.0	301.6
LW. TEMP	377.7	334.6	331.9	315.2	300.9
FL. TEMP	412.0	349.2	349.8	322.3	301.2
PLUME	1.302E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLITS	4.225E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.386E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	4.705E-02	2.390E-02	4.508E-02	4.161E-02	2.221E-03
	6.822E-01	4.318E-01	3.786E-01	2.160E-01	1.093E-02
QSCW	6.116E-01	5.761E-01	5.427E-01	3.945E-01	3.189E-02
	-2.469E-01	-1.226E-01	-5.095E-03	-1.807E-02	4.861E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.110E+05	1.019E+05	1.121E+05	1.167E+05	2.037E+05
CO2	PPM	/	4.104E+04	4.488E+04	4.065E+04	3.884E+04	4.783E+03
CO	PPM	/	1.209E+03	1.322E+03	1.198E+03	1.144E+03	141.
OD	1/M	/	1.84	2.32	2.15	2.33	0.362
CT	GM/M3	/	168.	175.	166.	152.	28.1

TIME = 1300.0 SECONDS.

U. TEMP	497.3	432.5	423.4	377.3	308.4
L. TEMP	389.6	336.3	346.3	319.6	302.3
UL. VOLUM	51.5	44.3	26.2	37.0	77.7
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	430.6	375.5	370.3	339.2	302.4
UW. TEMP	403.8	358.1	354.2	329.9	301.7
LW. TEMP	374.5	335.0	332.2	315.7	300.9
FL. TEMP	407.9	350.4	349.7	323.3	301.4
PLUME	4.206E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	3.475E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	1.140E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	4.031E-02	1.390E-02	2.778E-02	2.796E-02	1.675E-03
QSCW	5.249E-01	3.492E-01	2.946E-01	1.722E-01	1.055E-02
	4.909E-01	4.394E-01	4.048E-01	2.797E-01	2.710E-02
	-1.005E-01	-7.802E-02	-1.156E-02	-1.371E-02	1.257E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.069E+05	1.070E+05	1.124E+05	1.176E+05	2.009E+05
CO2 PPM	4.296E+04	4.283E+04	4.075E+04	3.866E+04	5.879E+03
CO PPM	1.266E+03	1.262E+03	1.201E+03	1.139E+03	173.
OD 1/M	2.02	2.32	2.25	2.40	0.446
CT GM/M3	214.	230.	218.	208.	37.8

TIME = 1400.0 SECONDS.

U. TEMP	477.2	421.3	412.6	371.0	307.8
L. TEMP	386.4	336.3	347.0	320.9	302.1
UL. VOLUM	51.5	44.2	26.2	37.0	77.7
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	425.2	373.6	368.6	338.7	302.5
UW. TEMP	399.0	356.7	353.0	329.6	301.8
LW. TEMP	373.4	335.6	332.9	316.3	301.0
FL. TEMP	403.4	350.3	349.9	324.3	301.5
PLUME	3.584E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.725E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	8.938E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	6.861E-03	2.395E-03	1.689E-02	2.224E-02	1.288E-03
	4.510E-01	3.095E-01	2.560E-01	1.531E-01	9.927E-03
QSCW	3.603E-01	3.510E-01	3.196E-01	2.275E-01	2.306E-02
	-9.212E-02	-7.754E-02	-1.015E-02	-1.187E-02	7.620E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.055E+05	1.062E+05	1.106E+05	1.162E+05	1.984E+05
CO2	PPM	4.359E+04	4.325E+04	4.148E+04	3.926E+04	6.883E+03
CO	PPM	1.284E+03	1.274E+03	1.222E+03	1.157E+03	203.
OD	1/M	2.14	2.40	2.35	2.48	0.523
CT	GM/M3	264.	286.	273.	267.	49.4

TIME = 1500.0 SECONDS.

U. TEMP	457.2	410.4	402.3	365.5	307.3
L. TEMP	381.5	335.2	346.7	321.3	302.3
UL. VOLUM	51.3	44.1	26.2	37.0	77.7
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	420.8	372.2	367.4	338.5	302.6
UW. TEMP	394.5	355.4	351.8	329.5	301.9
LW. TEMP	372.8	336.4	333.7	316.9	301.0
FL. TEMP	398.7	349.7	349.8	324.9	301.6
PLUME	3.549E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.975E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	6.478E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-2.844E-02	-1.052E-02	5.622E-03	1.691E-02	9.942E-04
QSCW	3.998E-01	2.811E-01	2.276E-01	1.395E-01	9.302E-03
	2.292E-01	2.646E-01	2.380E-01	1.807E-01	1.980E-02
	-9.439E-02	-8.184E-02	-1.031E-02	-1.296E-02	8.882E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.065E+05	1.060E+05	1.105E+05	1.154E+05	1.960E+05
CO2	PPM	4.324E+04	4.338E+04	4.166E+04	3.966E+04	7.820E+03
CO	PPM	1.274E+03	1.278E+03	1.228E+03	1.168E+03	230.
OD	1/M	2.21	2.48	2.43	2.54	0.596
CT	GM/M3	316.	345.	330.	326.	62.7

TIME = 1600.0 SECONDS.

U. TEMP	437.4	399.3	391.8	359.9	306.9
L. TEMP	377.4	334.3	346.5	321.8	302.4
UL. VOLUM	51.0	44.0	26.2	37.0	77.7
UL. THICK	2.4	2.4	2.4	4.9	2.4
CE. TEMP	416.3	370.6	365.9	338.2	302.7
UW. TEMP	389.7	353.8	350.5	329.2	301.9
LW. TEMP	372.3	337.0	334.3	317.5	301.1
FL. TEMP	393.8	348.6	349.2	325.3	301.7
PLUME	3.336E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	1.333E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	4.373E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-5.876E-02	-2.279E-02	-4.959E-03	1.171E-02	7.460E-04
	3.564E-01	2.562E-01	2.031E-01	1.278E-01	8.717E-03
QSCW	1.135E-01	1.834E-01	1.619E-01	1.362E-01	1.701E-02
	-8.919E-02	-8.022E-02	-8.731E-03	-1.250E-02	9.320E-05

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.089E+05	1.071E+05	1.116E+05	1.156E+05	1.938E+05
CO2	PPM	4.228E+04	4.299E+04	4.129E+04	3.965E+04	8.686E+03
CO	PPM	1.246E+03	1.267E+03	1.216E+03	1.168E+03	256.
OD	1/M	2.26	2.52	2.47	2.58	0.663
CT	GM/M3	369.	404.	388.	387.	77.7



TIME = 1700.0 SECONDS.

U. TEMP	419.9	389.4	382.4	354.7	306.5
L. TEMP	373.7	333.1	345.4	321.8	302.5
UL. VOLUM	50.7	43.9	26.2	37.0	77.7
UL. THICK	2.3	2.4	2.4	4.9	2.4
CE. TEMP	412.1	368.9	364.4	337.7	302.7
UW. TEMP	384.7	352.0	348.8	328.7	301.9
LW. TEMP	371.8	337.4	334.8	318.0	301.2
FL. TEMP	389.1	347.4	348.4	325.4	301.8
PLUME	2.650E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	8.000E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	2.624E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-8.100E-02	-3.221E-02	-1.351E-02	7.219E-03	5.201E-04
	3.220E-01	2.349E-01	1.830E-01	1.173E-01	8.164E-03
QSCW	3.083E-02	1.188E-01	1.008E-01	9.864E-02	1.452E-02
	-8.288E-02	-8.059E-02	-9.784E-03	-1.305E-02	9.807E-05

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.116E+05	1.089E+05	1.134E+05	1.167E+05	1.918E+05
CO2 PPM	4.119E+04	4.229E+04	4.060E+04	3.929E+04	9.469E+03
CO PPM	1.214E+03	1.246E+03	1.196E+03	1.158E+03	279.
OD 1/M	2.30	2.54	2.49	2.59	0.723
CT GM/M3	424.	464.	447.	449.	94.2

TIME = 1800.0 SECONDS.

U. TEMP	401.2	379.6	372.6	349.6	306.1
L. TEMP	367.7	329.8	344.4	321.7	302.6
UL. VOLUM	49.9	43.4	26.2	37.0	77.7
UL. THICK	2.3	2.3	2.4	4.9	2.4
CE. TEMP	408.3	367.0	362.7	337.2	302.7
UW. TEMP	379.4	349.9	346.9	328.1	302.0
LW. TEMP	371.2	337.6	335.1	318.4	301.2
FL. TEMP	384.1	345.5	347.2	325.3	301.9
PLUME	1.495E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	2.667E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	8.747E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.059E-01	-4.191E-02	-2.158E-02	3.072E-03	3.150E-04
	2.945E-01	2.157E-01	1.649E-01	1.081E-01	7.643E-03
QSCW	-1.606E-03	6.237E-02	4.644E-02	6.528E-02	1.231E-02
	-9.109E-02	-9.173E-02	-9.267E-03	-1.320E-02	1.044E-04

# UPPER LAYER SPECIES CONCENTRATION

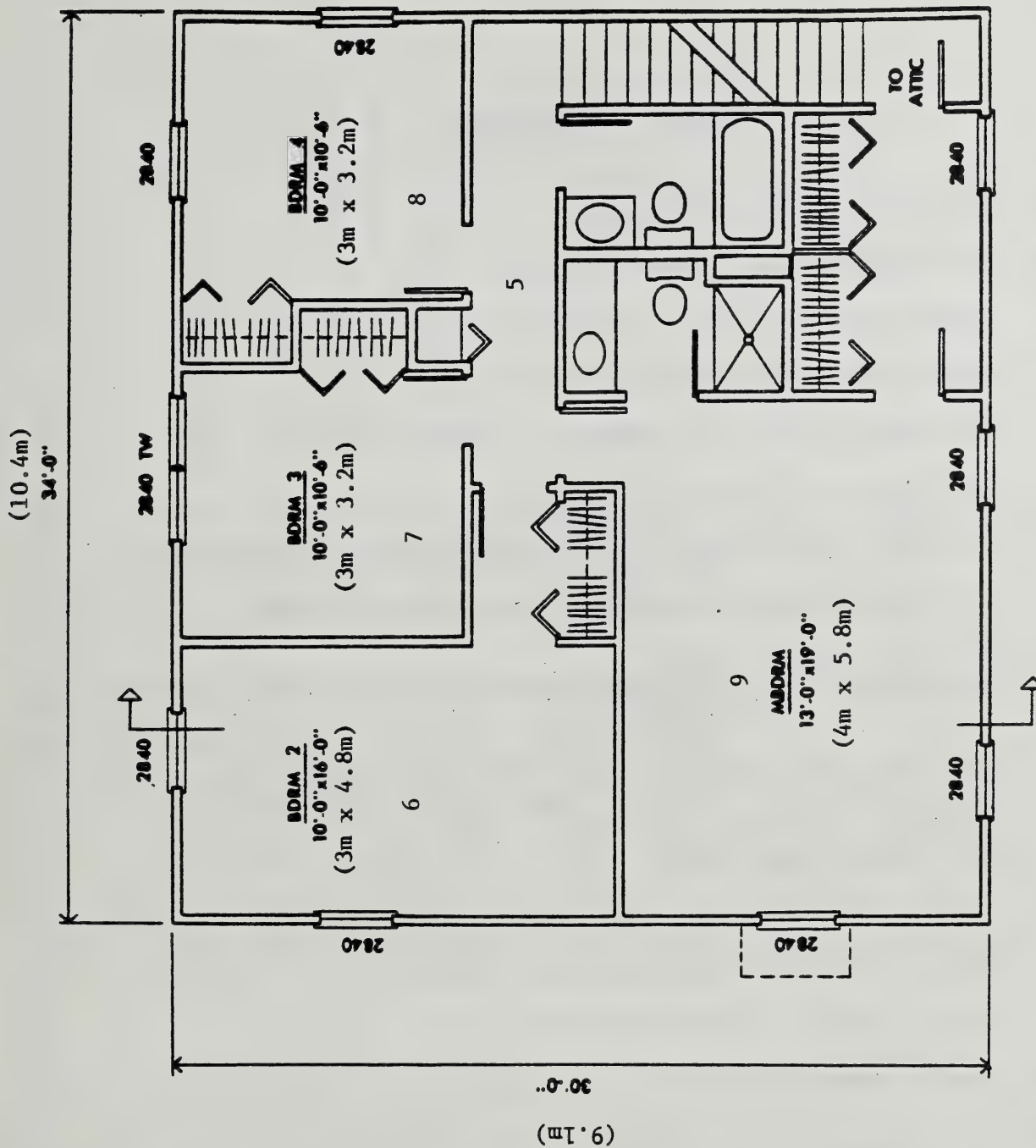
O2 PPM	1.148E+05	1.108E+05	1.154E+05	1.182E+05	1.901E+05
CO2 PPM	3.987E+04	4.149E+04	3.969E+04	3.868E+04	1.017E+04
CO PPM	1.175E+03	1.222E+03	1.170E+03	1.140E+03	300.
OD 1/M	2.33	2.56	2.49	2.59	0.778
CT GM/M3	479.	525.	506.	511.	112.

FIRE #6

COUCH AND PANELLING

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)





A.2 - Floor Plan for FIRE #6

UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG. 10, 1977



NBS



## B. FUEL LOAD BACKGROUND FOR FIRE #6

### FIRE #6 - FAMILY ROOM

BUILDING: Two-story detached house

OCCUPANTS: All fully capable, except as noted.

Father aged 45 asleep in bedroom 1.

Mother aged 40 asleep in bedroom 1.

Boy aged 16 asleep in bedroom 2 - sleeping penalty = 15.

Girl aged 14 asleep in bedroom 3.

FIRE: Cigarette fire in family room couch spreading to panelling.

DOORS: All doors downstairs open, all bedroom doors closed.

FUEL: Material Code: UPS001  
Material ID: Upholstered sofa, F32, wood frame, PU foam FR olefin.

Panelling - See NBSIR 85-2988 - Effect of Wall and Room Surfaces on the Rate of Heat, Smoke, and Carbon Monoxide Production in a Park Lodging Bedroom Fire-Test #R1 and Test #R5

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

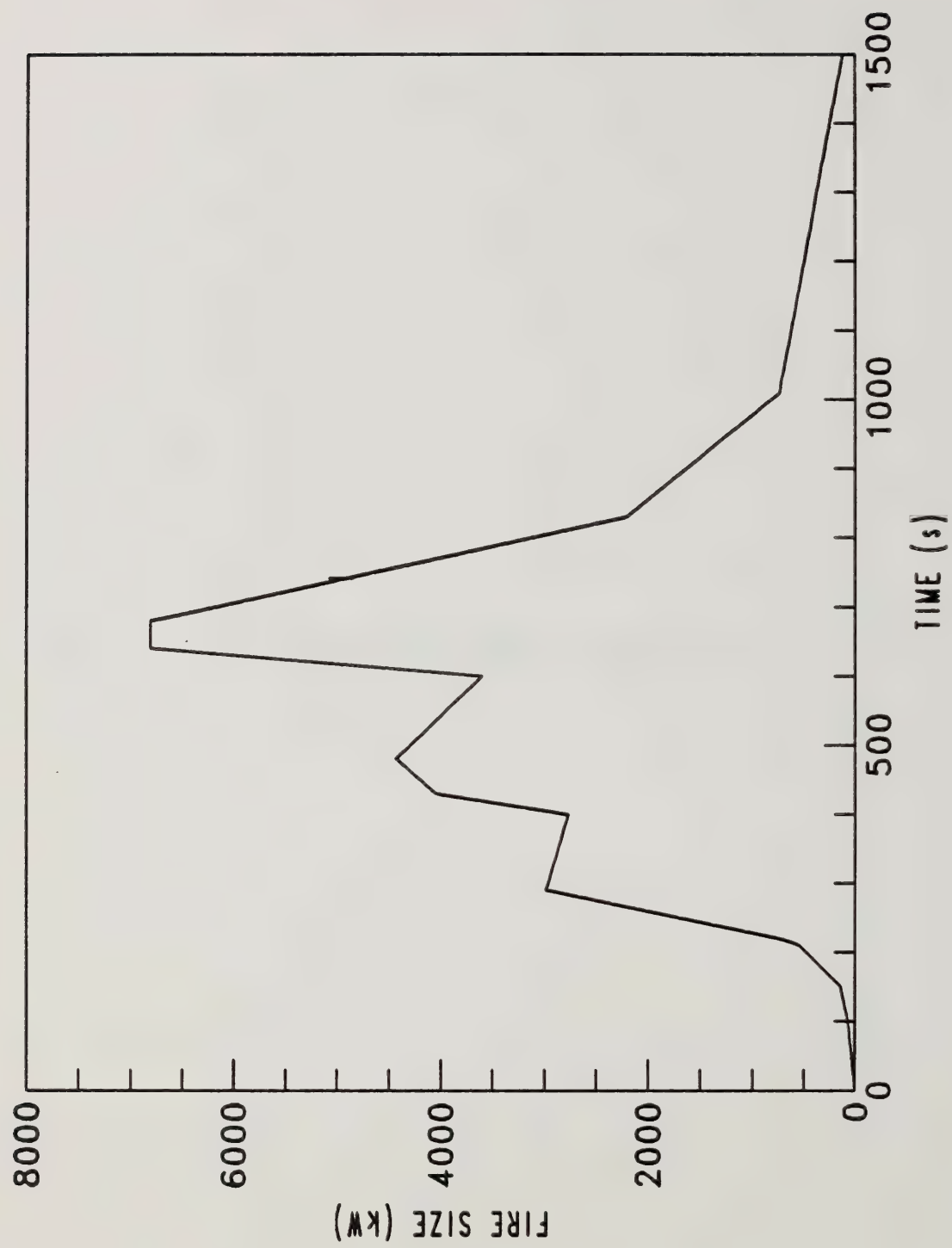
FIRE ROOM: Family room (first floor)

FLASHOVER  
TIME: 4 minutes

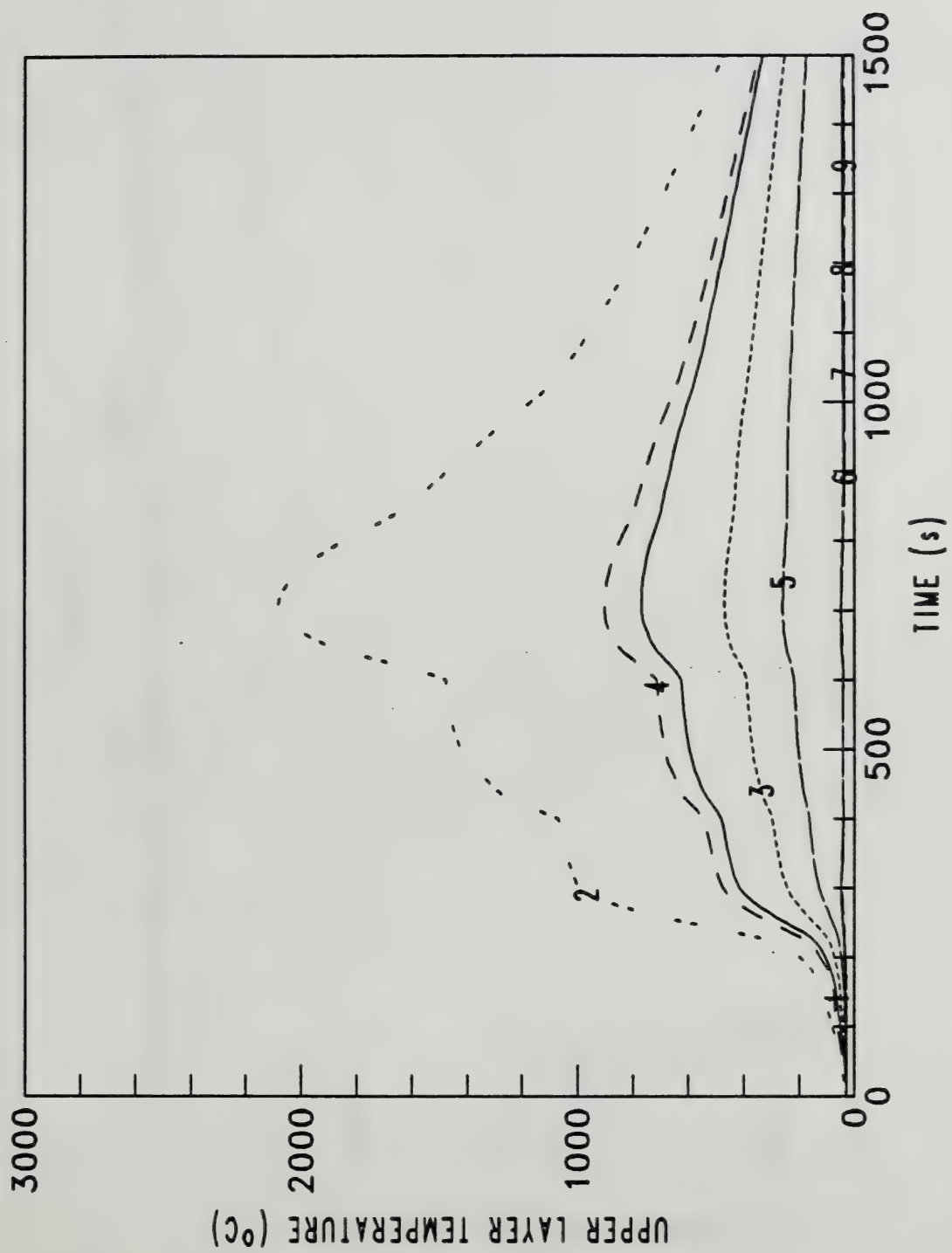
VERSN	017	TWO STORY HOUSE												
TIMES	1500	100	0	0	0	0	0	0	0	0	0	0	0	0
NROOM	9													
NMXOP	1													
TAMB	300													
HI/F	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
WIDTH	3.6	6.4	4.1	1.0	1.0	1.0	5.8	3.2	3.2	3.2	3.2	3.2	3.2	3.0
DEPTH	4.2	4.2	5.8	3.0	9.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.8
HEIGH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
HVENT	1	2	1.1	2.1	0.0									
HVENT	1	3	1.1	2.1	0.0									
HVENT	2	4	1.1	2.1	0.0									
HVENT	3	4	1.1	2.1	0.									
HVENT	3	5	1.1	2.1	0.0									
HVENT	5	6	.01	4.8	2.7									
HVENT	5	7	.01	4.8	2.7									
HVENT	5	8	.01	4.8	2.7									
HVENT	2	10	1.1	0.2	0.0									
HVENT	5	9	.01	4.8	2.7									
CEILI														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
DNSTY	790	790	790	790	790	790	790	790	790	790	790	790	790	790
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
WALLS														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
DNSTY	790	790	790	790	790	790	790	790	790	790	790	790	790	790
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
FLOOR														
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
DNSTY	300	300	300	300	300	300	300	300	300	300	300	300	300	300
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
LFBO	2													
LFBT	1													
LFPOS	1													
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	18100	300						
LFMAX	13													
FTIME	100	50	65	75	110	30	50	120	40	40	150	180	490	
FMASS	0.0	.004	.008	.032	.165	.153	.224	.245	.199	.376	.376	.122	.041	0.0
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

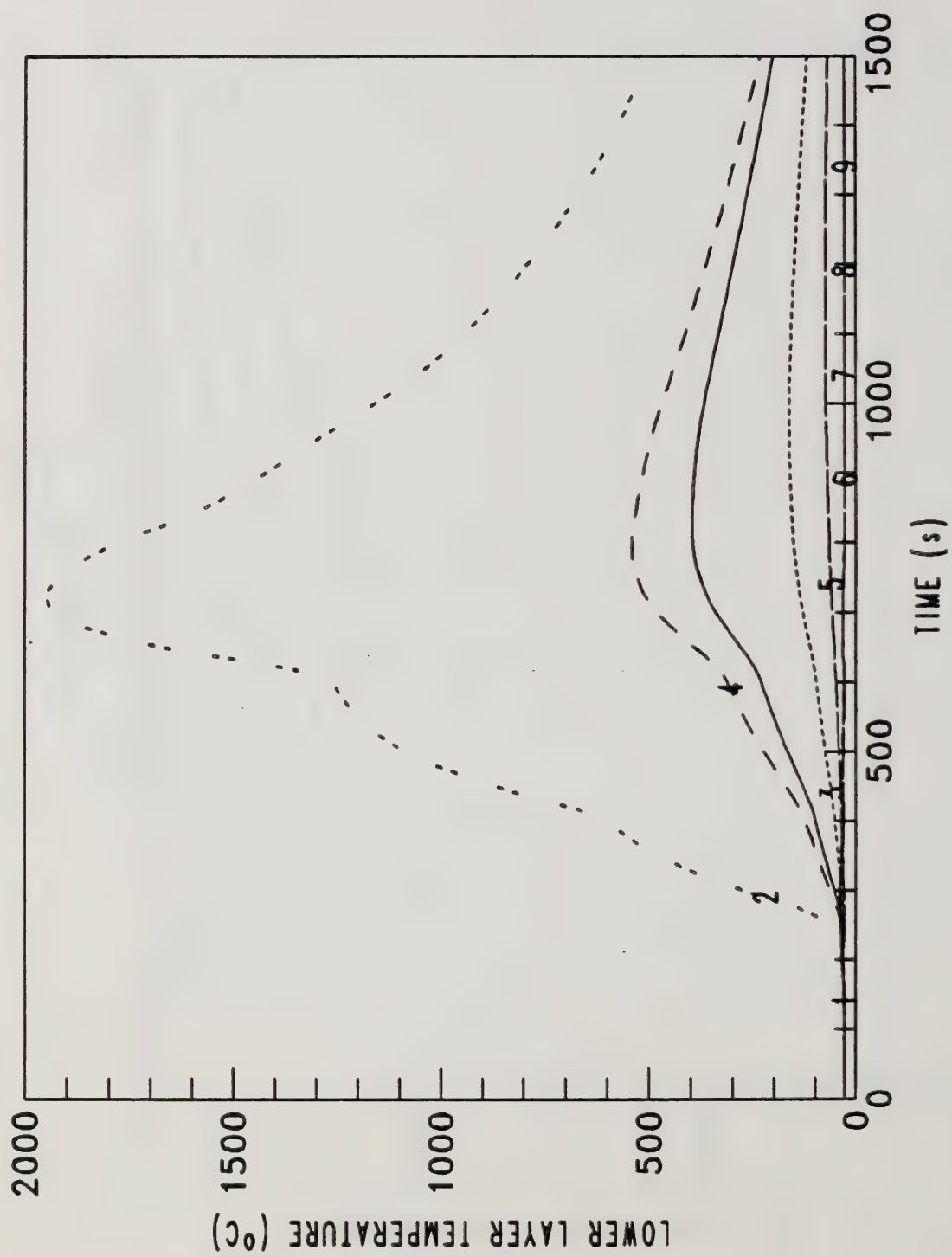


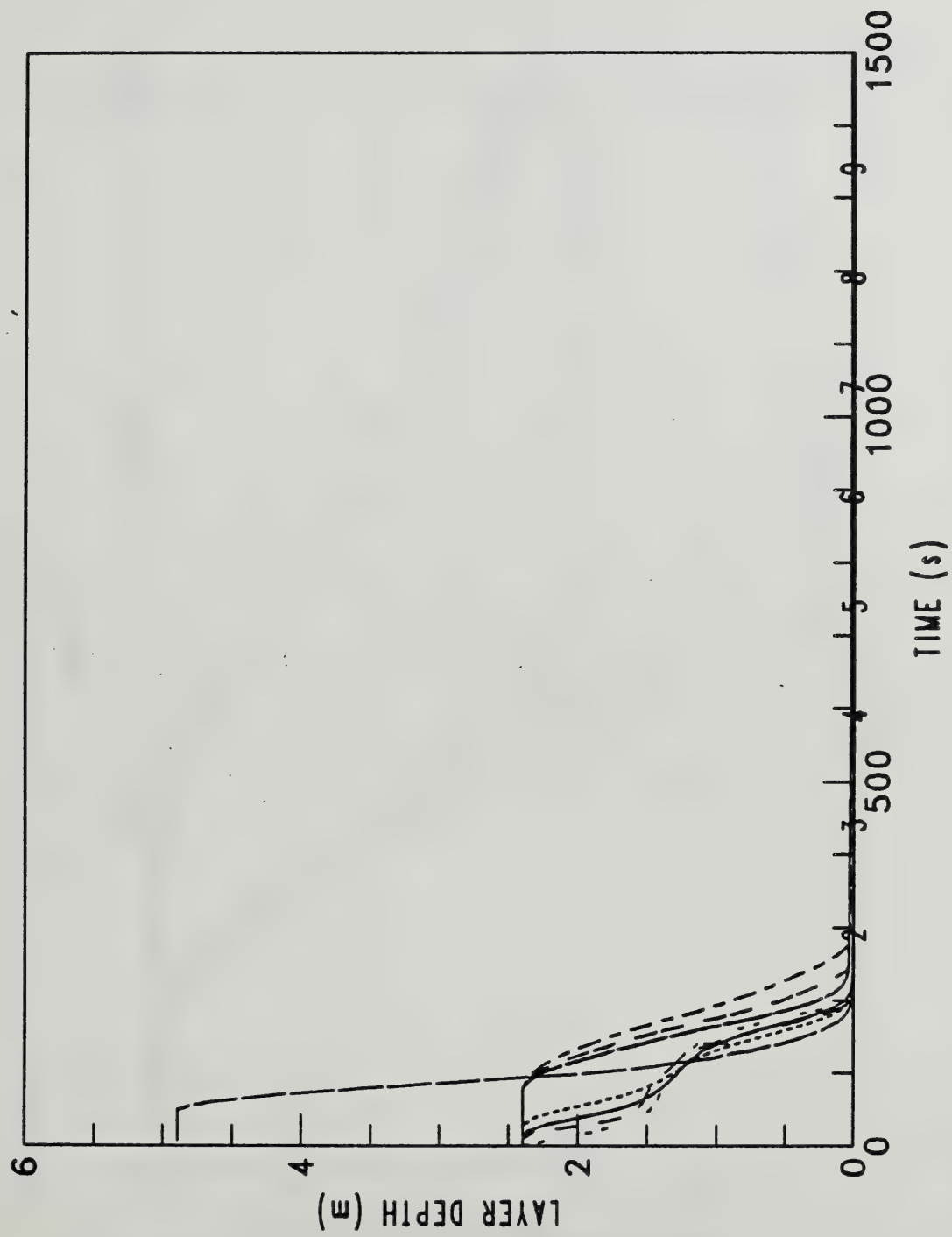
D. OUTPUT - GRAPHS FOR FIRE #6

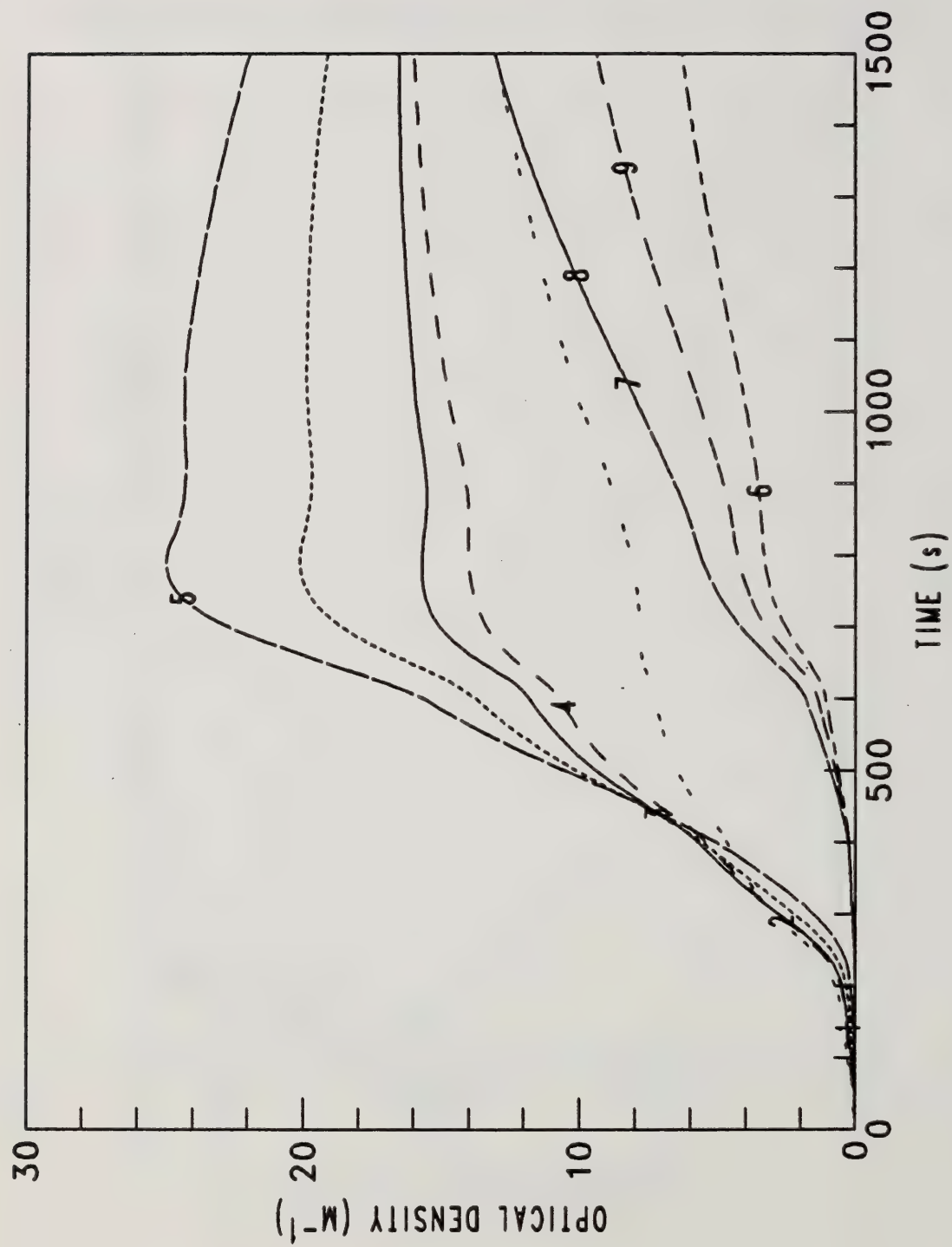


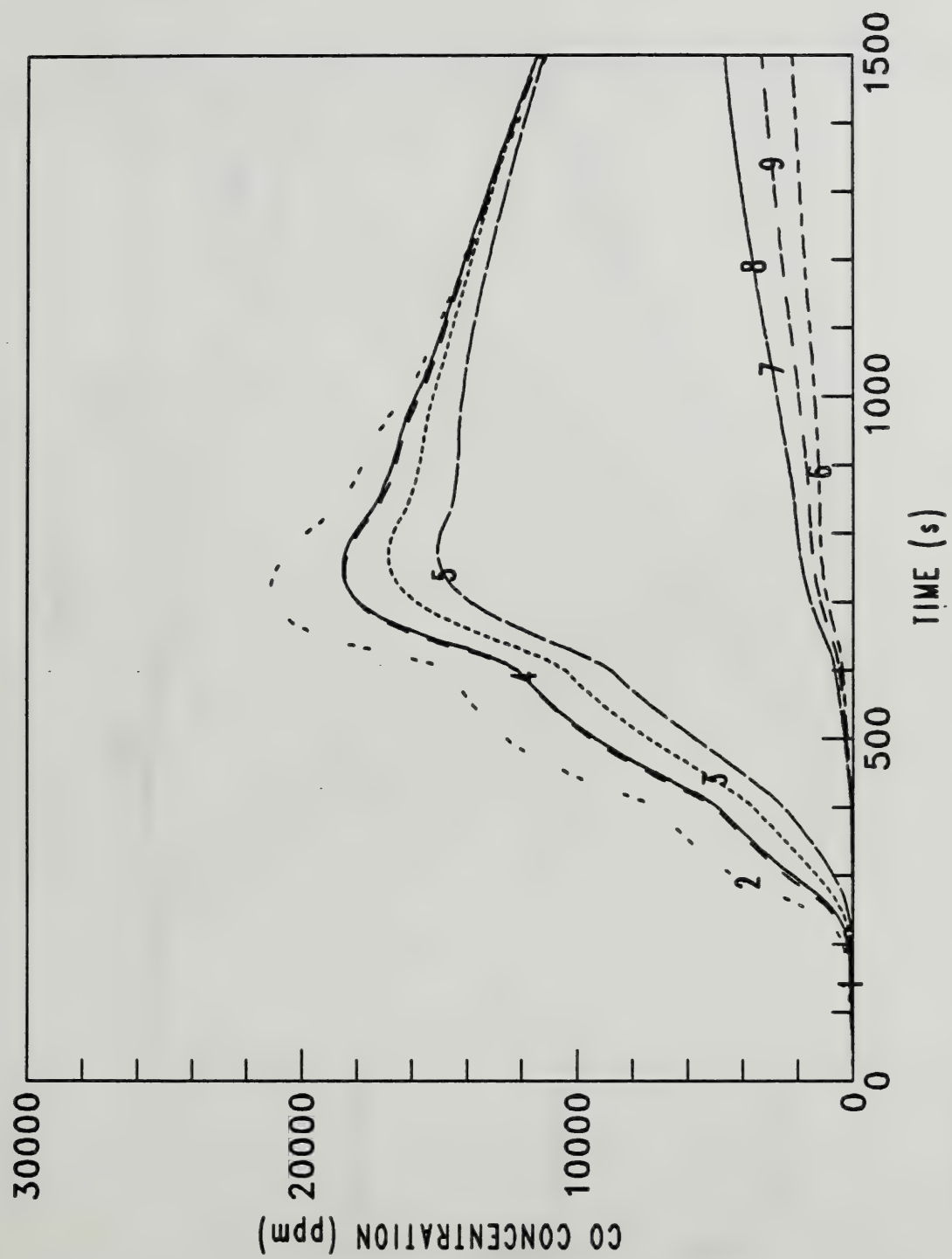




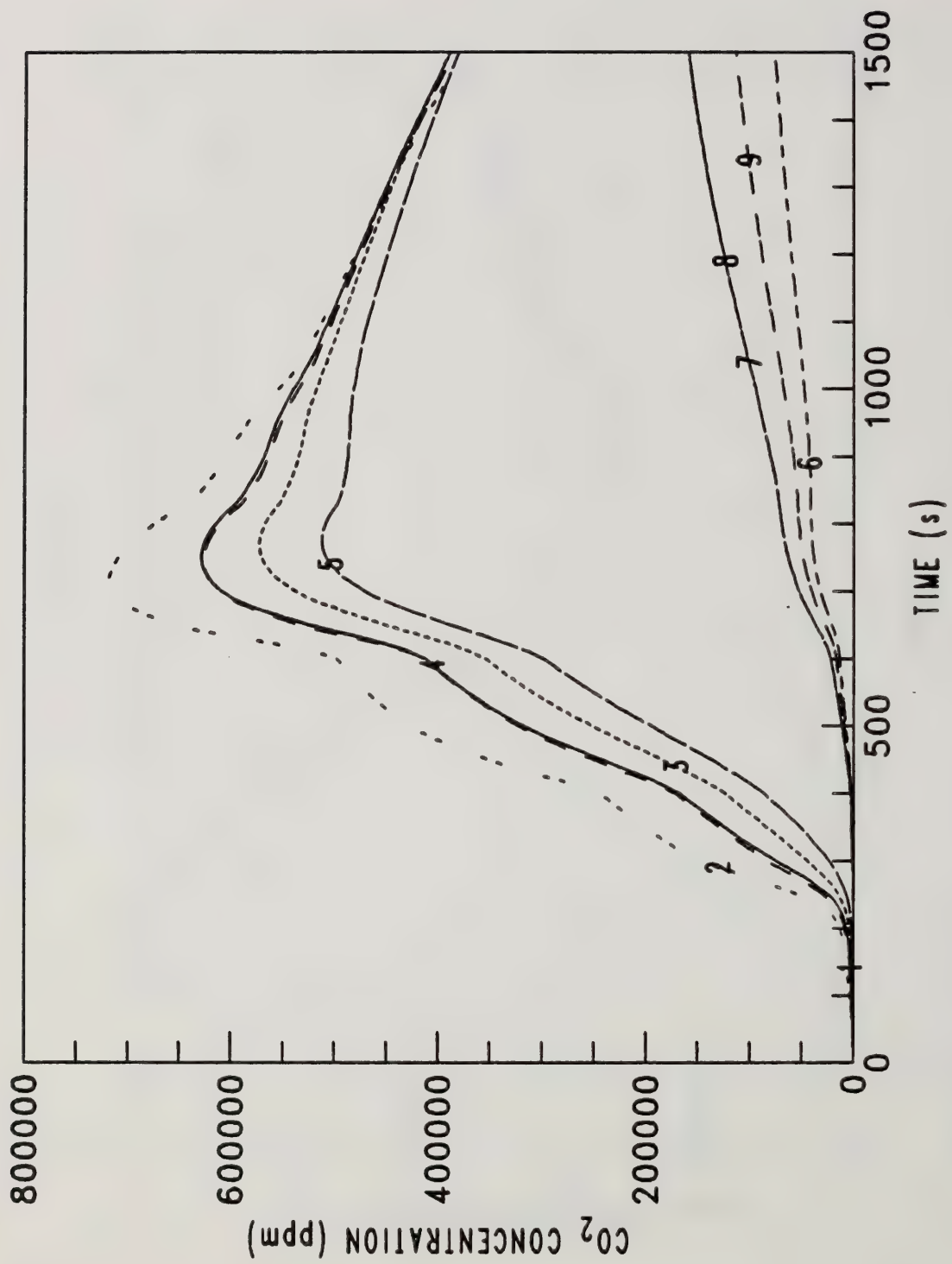


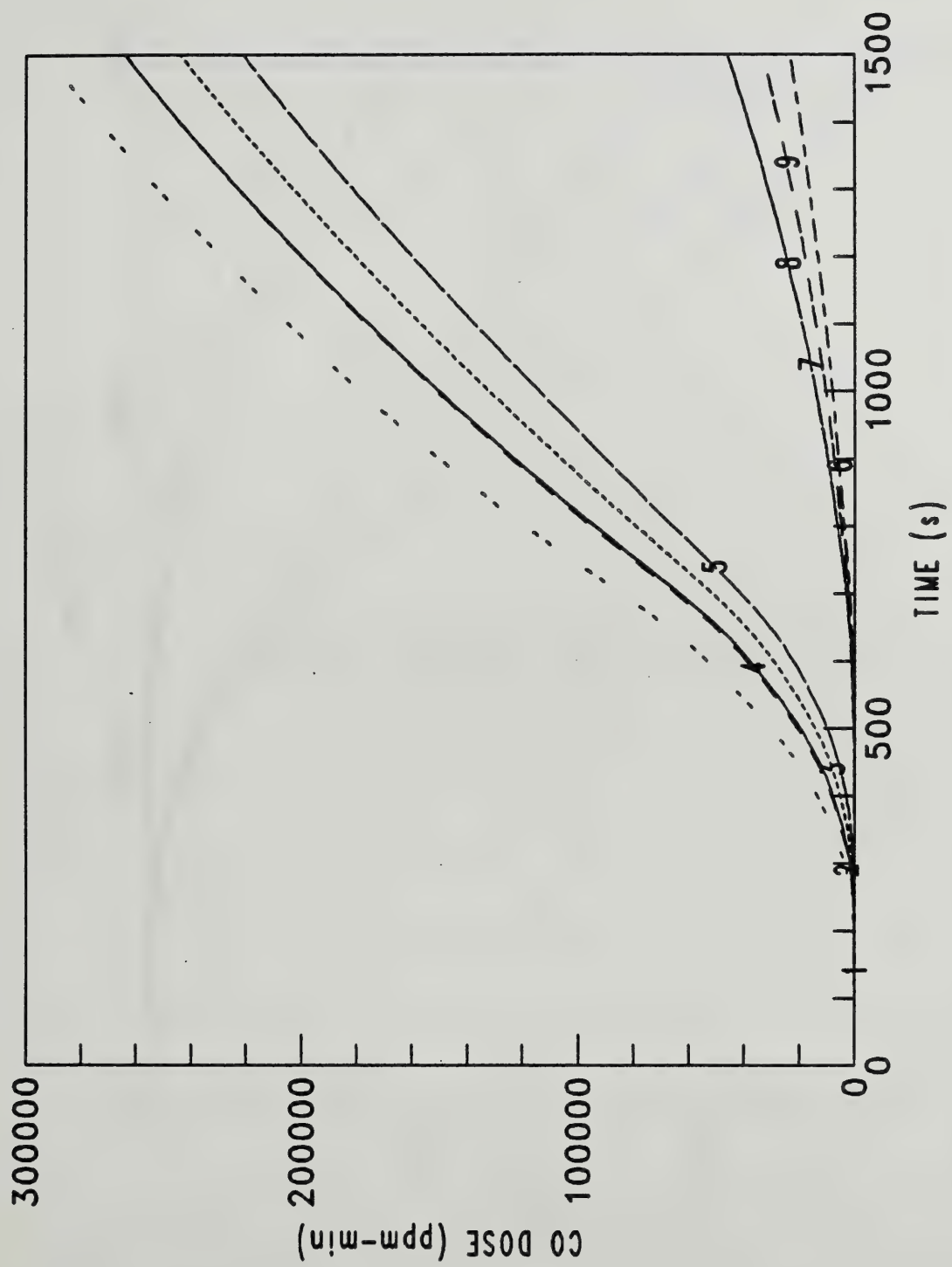


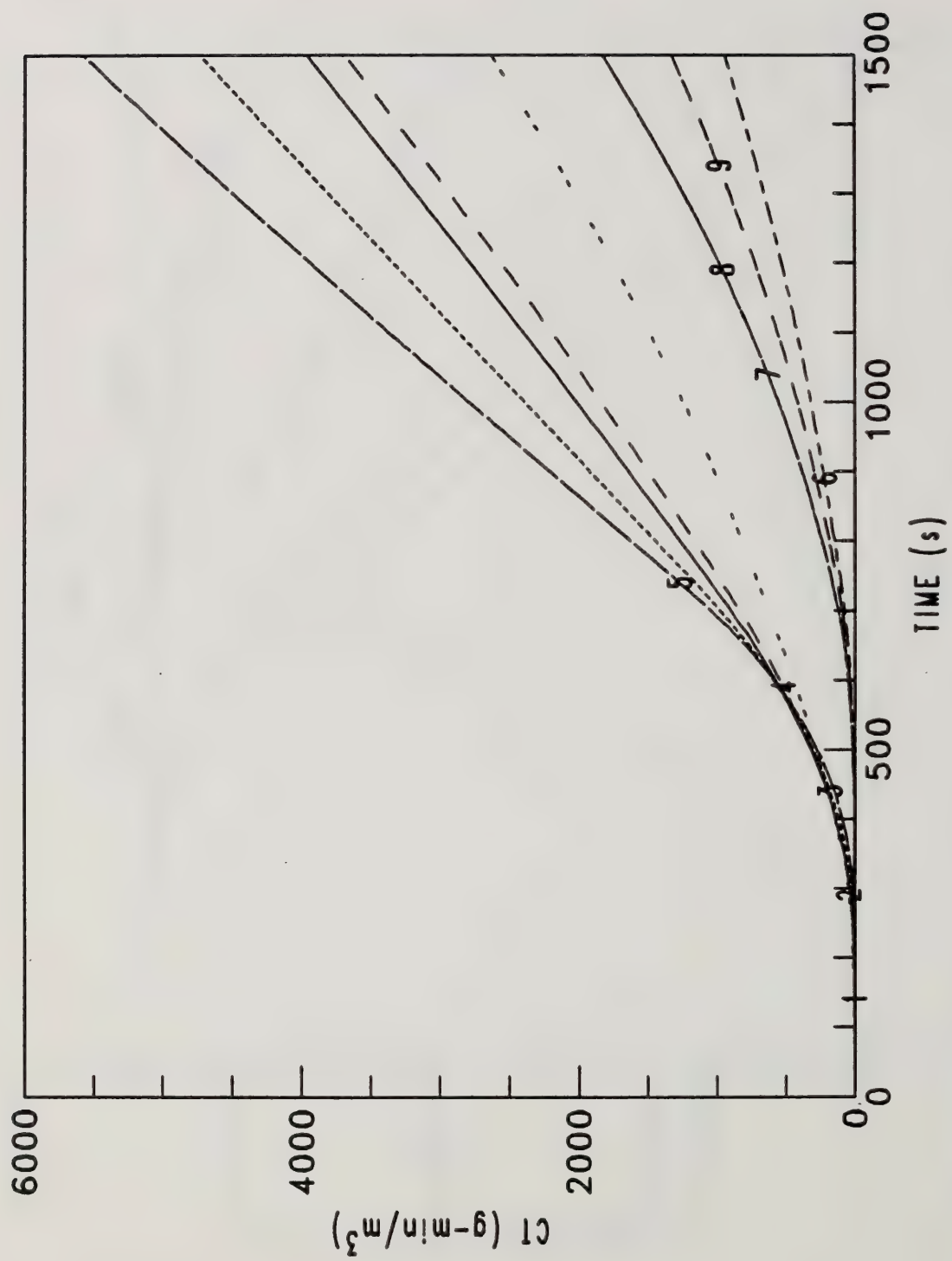












E. OUTPUT - COMPUTER FILES FOR FIRE #6

[illegible][illegible][illegible][illegible]

4 ( 1 )	0.00	1.10	0.00	0.00	0.00	0.00
BW=	0.00	1.10	0.00	0.00	0.00	0.00
HT=	0.00	2.10	0.00	0.00	0.00	0.00
HL=	0.00	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	2.10	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	0.00	0.00	0.00

5 ( 1 )	0.00	0.00	1.10	0.00	0.00	0.01	0.01	0.01	0.00
BW=	0.00	0.00	2.10	0.00	0.00	4.80	4.80	4.80	0.00
HT=	0.00	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.00
HL=	0.00	0.00	0.00	0.00	0.00	4.80	4.80	4.80	0.00
HLP=	0.00	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.00

6 ( 1 )	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BW=	0.00	0.00	0.00	0.01	0.00	0.00	0.00
HT=	0.00	0.00	0.00	4.80	0.00	0.00	0.00
HL=	0.00	0.00	0.00	2.70	0.00	0.00	0.00
HHP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	2.70	0.00	0.00	0.00

7 ( 1 )	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BW=	0.00	0.00	0.00	0.01	0.00	0.00	0.00
HT=	0.00	0.00	0.00	4.80	0.00	0.00	0.00
HL=	0.00	0.00	0.00	2.70	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	4.80	0.00	0.00	0.00
HLP=	0.00	0.00	0.00	2.70	0.00	0.00	0.00

8 (1) BW=



HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
  
9 ( 1) BW= 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00  
HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00

CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2  
TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 13  
TOTAL TIME INTERVAL = 1500  
FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 4.00E-03 8.00E-03 3.20E-02 0.16 0.15 0.22 0.24 0.20 0.38 0.12 4.1  
0E-02 0.00E+00  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.0  
0E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.  
-1.4

[illegible]

[illegible][illegible]



TIME = 100.0 SECONDS.

U. TEMP	319.0	355.8	307.6	335.4	300.1	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	18.3	33.5	19.7	3.3	10.3	0.0	0.0	0.0	0.0
UL. THICK	1.2	1.2	0.8	1.1	1.1	0.0	0.0	0.0	0.0
CE. TEMP	301.5	306.6	300.3	303.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	301.0	304.4	300.2	302.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.1	300.6	300.0	300.1	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.2	300.9	300.0	300.2	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	4.577E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	8.153E-03	2.352E-02	3.473E-03	1.949E-02	6.503E-05	3.079E-06	2.802E-06	2.802E-06	2.939E-06
	9.205E-03	4.068E-02	2.848E-03	9.519E-03	8.752E-06	1.891E-06	1.306E-06	1.306E-06	1.540E-06
QSCW	1.107E-01	4.164E-01	3.487E-02	2.472E-01	1.385E-04	3.483E-06	3.142E-06	3.142E-06	3.312E-06
	-2.430E-04	-2.144E-03	-3.405E-05	-2.482E-04	1.398E-08	-9.311E-06	-9.110E-06	-9.110E-06	-9.203E-06

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.044E+05	2.010E+05	2.058E+05	2.025E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	1.880E+03	4.333E+03	868.	3.215E+03	15.2	7.62	7.69	7.65
CO	PPM	55.4	128.	25.6	94.7	0.448	0.224	0.227	0.225
OD	1/M	0.138	0.285	6.606E-02	0.224	1.186E-03	5.944E-04	6.001E-04	5.972E-04
CT	GM/M3	1.04	3.01	0.340	1.65	2.952E-03	1.094E-03	9.864E-04	1.048E-03

TIME = 200.0 SECONDS.

U. TEMP	397.1	510.3	351.2	419.1	314.8	301.3	301.6	301.6	301.5
L. TEMP	300.3	301.0	300.1	300.2	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	31.3	53.9	51.0	6.2	42.8	19.0	6.7	6.7	10.8
UL. THICK	2.1	2.0	2.1	2.1	4.8	0.8	0.7	0.7	0.7
CE. TEMP	313.7	336.8	306.1	320.0	301.0	300.0	300.0	300.0	300.0
UW. TEMP	309.3	325.7	304.1	313.8	300.7	300.0	300.0	300.0	300.0
LW. TEMP	301.6	305.5	300.7	301.6	300.1	300.0	300.0	300.0	300.0
FL. TEMP	302.6	309.1	301.2	302.6	300.2	300.0	300.0	300.0	300.0
PLUME	0.000E+00	7.678E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	6.275E-02	2.267E-01	2.539E-02	9.639E-02	8.549E-03	6.608E-04	8.215E-04	8.215E-04	7.437E-04
	1.220E-01	4.131E-01	5.691E-02	1.257E-01	1.120E-02	4.395E-04	4.062E-04	4.062E-04	4.182E-04
QSCW	7.908E-01	1.810E+00	3.723E-01	9.626E-01	8.149E-02	3.556E-03	4.713E-03	4.713E-03	4.142E-03
	-7.432E-03	-3.855E-02	-2.743E-03	-7.863E-03	-1.917E-04	-8.934E-06	-8.222E-06	-8.222E-06	-8.508E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.928E+05	1.829E+05	1.981E+05	1.906E+05	2.038E+05	2.067E+05	2.066E+05	2.066E+05	2.067E+05
CO2 PPM	1.028E+04	1.743E+04	6.435E+03	1.185E+04	2.287E+03	230.	289.	289.	260.
CO PPM	303.	514.	190.	349.	67.4	6.79	8.52	8.52	7.65
OD 1/M	0.606	0.800	0.429	0.662	0.170	1.791E-02	2.243E-02	2.243E-02	2.015E-02
CT GM/M3	8.80	15.2	5.54	12.0	1.18	9.970E-02	0.115	0.115	0.106



TIME = 300.0 SECONDS.

U.TEMP	721.8	1301.6	545.1	780.6	420.9	325.2	318.4	321.7
L.TEMP	325.4	471.2	308.2	315.5	301.4	300.3	301.0	300.5
UL.VOLUM	35.2	64.0	55.5	7.0	43.4	52.2	23.0	33.7
UL.THICK	2.3	2.4	2.3	2.3	4.8	2.2	2.4	2.3
CE.TEMP	402.1	682.4	352.3	429.7	322.1	303.6	302.7	303.2
UW.TEMP	374.8	632.7	337.3	398.0	315.4	302.4	301.9	302.2
LW.TEMP	332.5	555.7	311.9	340.1	303.2	300.5	300.5	300.5
FL.TEMP	352.3	696.2	319.4	364.7	305.3	300.9	300.8	300.9
PLUME	0.000E+00	5.396E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.639E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.967E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.177E+00	1.463E+01	3.119E-01	1.744E+00	1.054E-01	9.530E-03	7.741E-03	8.698E-03
	1.956E+00	1.531E+01	6.840E-01	2.532E+00	2.077E-01	2.918E-02	2.327E-02	2.641E-02
QSCW	3.279E+00	5.325E+00	1.991E+00	3.519E+00	9.532E-01	1.453E-01	9.601E-02	1.188E-01
	-1.811E-01	-2.249E+00	-5.967E-02	-4.145E-02	-1.475E-01	-1.361E-03	9.814E-06	-7.329E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	8.981E+04	130.	1.331E+05	7.966E+04	1.643E+05	1.991E+05	2.009E+05	2.009E+05	1.999E+05
CO2 PPM	8.461E+04	1.494E+05	5.337E+04	9.196E+04	3.080E+04	5.723E+03	4.650E+03	4.650E+03	5.192E+03
CO PPM	2.493E+03	4.401E+03	1.573E+03	2.710E+03	908.	169.	137.	137.	153.
OD 1/M	2.74	2.69	2.29	2.76	1.71	0.412	0.342	0.342	0.378
CT GM/M3	42.3	52.0	33.0	47.8	19.8	5.58	5.36	5.36	5.59

THE FIRE BECAME VENTILATION CONTROLLED AT 301. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 400.0 SECONDS.

U. TEMP	777.5	1424.1	581.7	839.9	444.0	318.6	314.2	314.2	316.3
L. TEMP	403.3	844.6	336.0	383.9	309.1	301.3	301.7	301.7	301.5
UL. VOLUM	36.0	64.4	56.7	7.1	43.9	53.7	23.0	23.0	34.6
UL. THICK	2.4	2.4	2.4	2.4	4.9	2.3	2.4	2.4	2.4
CE. TEMP	465.6	1029.9	385.0	502.4	338.9	304.3	303.2	303.2	303.8
UW. TEMP	429.4	979.6	363.0	462.4	328.1	303.0	302.2	302.2	302.7
LW. TEMP	379.9	793.7	328.7	402.0	309.0	300.9	301.0	301.0	300.9
FL. TEMP	427.6	1050.8	346.3	455.5	314.7	301.6	301.3	301.3	301.5
PLUME	0.000E+00	2.366E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.537E+00	1.775E+01	3.768E-01	2.250E+00	1.280E-01	4.276E-03	4.592E-03	4.592E-03	4.616E-03
	2.668E+00	1.337E+01	9.738E-01	3.667E+00	3.343E-01	2.564E-02	1.937E-02	1.937E-02	2.327E-02
QSCW	2.979E+00	2.611E+00	1.946E+00	3.136E+00	9.979E-01	8.439E-02	6.011E-02	6.011E-02	7.088E-02
	-1.372E-01	-1.405E+00	-4.975E-02	-5.996E-01	-2.382E-02	-4.816E-04	4.178E-05	4.178E-05	-4.475E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	3.647E+04	0.000E+00	6.723E+04	3.895E+04	9.619E+04	1.957E+05	1.973E+05	1.973E+05	1.967E+05
CO2	PPM	1.874E+05	2.666E+05	1.377E+05	1.905E+05	9.748E+04	8.415E+03	7.482E+03	7.482E+03	8.019E+03
CO	PPM	5.523E+03	7.855E+03	4.057E+03	5.612E+03	2.872E+03	248.	220.	220.	236.
OD	1/M	5.65	4.38	5.54	5.31	5.14	0.618	0.557	0.557	0.594
CT	GM/M3	144.	137.	126.	145.	98.9	17.5	15.6	15.6	16.9

TIME = 500.0 SECONDS.

U. TEMP	890.5	1845.9	641.1	976.3	474.2	317.0	314.4	314.4	314.8
L. TEMP	518.1	1501.6	378.7	544.5	347.1	302.0	301.7	301.7	301.8
UL. VOLUM	36.3	64.4	57.0	7.2	44.1	55.7	23.0	23.0	34.6
UL. THICK	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	541.5	1594.6	417.4	605.3	354.4	304.6	303.6	303.6	304.0
UW. TEMP	497.3	1549.5	389.4	555.8	340.2	303.3	302.5	302.5	302.8
LW. TEMP	440.6	1144.3	350.0	484.4	317.2	301.2	301.1	301.1	301.1
FL. TEMP	530.7	1639.2	381.1	598.8	326.7	302.1	301.7	301.7	301.8
PLUME	0.000E+00	2.448E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	2.853E+00	2.556E+01	5.985E-01	4.229E+00	1.741E-01	3.378E-03	4.387E-03	4.387E-03	3.704E-03
	3.721E+00	3.697E+01	1.361E+00	5.062E+00	4.576E-01	2.499E-02	1.966E-02	1.966E-02	2.115E-02
QSCW	3.143E+00	1.120E+00	2.163E+00	3.191E+00	1.137E+00	6.973E-02	5.856E-02	5.856E-02	5.871E-02
	-4.557E-02	-3.330E-01	-5.394E-03	-3.268E-01	7.381E-03	-4.456E-07	-4.036E-07	-4.036E-07	-3.746E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.132E+04	0.000E+00	3.872E+04	2.310E+04	5.597E+04	1.915E+05	1.945E+05	1.945E+05	1.958E+05
CO2 PPM	3.548E+05	4.823E+05	2.728E+05	3.556E+05	2.070E+05	1.521E+04	1.568E+04	1.568E+04	1.457E+04
CO PPM	1.045E+04	1.421E+04	8.037E+03	1.048E+04	6.098E+03	448.	462.	462.	429.
OD 1/M	9.33	6.12	9.96	8.53	10.2	1.12	1.17	1.17	1.08
CT GM/M3	322.	266.	308.	311.	278.	38.0	35.5	35.5	36.4



TIME = 600.0 SECONDS.

U. TEMP.	897.9	1812.2	674.8	1056.7	415.3	361.1	373.4	373.4	367.4
L. TEMP.	359.7	1566.2	330.7	393.3	321.5	329.5	326.6	326.6	328.2
U. VOLUM	29.0	64.0	42.9	5.6	37.6	46.9	22.6	22.6	32.4
U. DEPTH	1.9	2.4	1.8	1.9	4.2	2.0	2.4	2.4	2.2
CE. TEMP	535.2	1596.8	428.5	664.9	331.2	316.0	318.4	318.4	316.4
UW. TEMP	535.2	1596.8	428.5	664.9	331.2	316.0	318.4	318.4	317.4
LW. TEMP	403.1	1056.7	343.4	456.5	306.9	305.4	305.9	305.9	305.5
FL. TEMP	478.6	1608.3	375.1	571.0	311.8	309.3	310.1	310.1	309.5
EMS(I)=	0.000E+00	6.087E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.939E+02	-2.470E+03	-8.306E+01	-1.248E+02	-1.021E+01	-3.507E+00	-2.540E+00	-2.540E+00	-3.002E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.106E+02	-5.503E+01	-1.092E+02	-3.965E+01	-4.681E+01	-1.740E+01	-1.286E+01	-1.286E+01	-1.509E+01
	2.010E+01	2.247E+00	9.092E+00	7.127E+00	-7.963E-01	-9.387E-01	-1.035E-01	-1.035E-01	-3.206E-01
Pres(kpa)	3.434E+01	2.887E+01	3.641E+01	3.380E+01	3.936E+01	4.579E+01	4.532E+01	4.532E+01	4.549E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	2.14	4.23	2.82	0.437	1.16	0.728	0.445	0.445	0.577
PPM	1.129E+05	2.036E+05	7.542E+04	1.391E+05	2.172E+04	9.530E+03	1.251E+04	1.251E+04	1.112E+04
CO	4.019E-02	7.931E-02	5.293E-02	8.195E-03	2.171E-02	1.366E-02	8.349E-03	8.349E-03	1.082E-02
PPM	3.326E+03	5.998E+03	2.222E+03	4.100E+03	640.	281.	369.	369.	328.
OD	2.679E-02	5.287E-02	3.529E-02	5.463E-03	1.448E-02	9.104E-03	5.566E-03	5.566E-03	7.210E-03
1/M	3.24	2.89	2.88	3.39	1.35	0.679	0.862	0.862	0.779





TIME = 800.0 SECONDS.

U. TEMP.	996.2	2317.8	677.3	1111.3	428.1	369.9	386.7	386.7	378.7
L. TEMP.	485.3	2290.4	357.7	638.6	315.6	324.6	318.0	318.0	322.1
U. VOLUM	32.4	64.3	52.4	6.6	42.7	53.0	23.0	23.0	34.2
U. DEPTH	2.1	2.4	2.2	2.2	4.7	2.3	2.4	2.4	2.4
CE. TEMP	672.6	2253.8	460.6	834.8	341.1	320.9	325.5	325.5	322.0
UW. TEMP	672.6	2253.8	460.6	834.8	341.1	320.9	325.5	325.5	323.5
LW. TEMP	506.8	1468.6	369.1	606.4	311.3	307.1	308.6	308.6	307.6
FL. TEMP	650.3	2256.4	415.9	817.9	318.9	311.7	314.3	314.3	312.6
EMS(I)=	0.000E+00	3.067E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-2.803E+02	-1.758E+03	-8.667E+01	-1.377E+02	-1.280E+01	-4.304E+00	-3.134E+00	-3.134E+00	-3.719E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-9.241E+01	-8.965E+00	-1.005E+02	-2.651E+01	-5.335E+01	-2.036E+01	-1.469E+01	-1.469E+01	-1.752E+01
	2.351E+01	-5.651E-01	1.176E+01	4.168E+00	7.796E-02	-2.519E-01	-9.072E-03	-9.072E-03	-6.109E-02
Pres(kpa)	2.707E+01	2.362E+01	2.907E+01	2.621E+01	3.242E+01	4.122E+01	4.118E+01	4.118E+01	4.105E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	3.53	5.21	4.83	0.646	2.11	1.46	0.819	0.819	1.09
PPM		1.845E+05	3.194E+05	1.061E+05	1.838E+05	3.607E+04	1.730E+04	2.341E+04	2.341E+04	2.045E+04
CO	MASS	6.620E-02	9.774E-02	9.052E-02	1.210E-02	3.965E-02	2.732E-02	1.535E-02	1.535E-02	2.037E-02
PPM		5.435E+03	9.409E+03	3.127E+03	5.415E+03	1.063E+03	510.	690.	690.	603.
OD	MASS	4.413E-02	6.516E-02	6.035E-02	8.069E-03	2.643E-02	1.821E-02	1.024E-02	1.024E-02	1.358E-02
1/M		4.77	3.55	4.03	4.26	2.17	1.20	1.56	1.56	1.39

TIME = 900.0 SECONDS.

U. TEMP.	915.7	1863.5	635.3	986.6	420.5	368.5	385.0	385.0	377.6
L. TEMP.	575.2	1908.3	387.6	730.5	313.6	319.1	315.2	315.2	316.2
U. VOLUM	34.5	64.4	55.1	7.0	43.5	54.2	23.0	23.0	34.4
U. DEPTH	2.3	2.4	2.3	2.3	4.8	2.3	2.4	2.4	2.4
CE. TEMP	660.6	1822.9	454.7	779.0	342.0	322.0	327.2	327.2	323.4
UW. TEMP	660.6	1822.9	454.7	779.0	342.0	322.0	327.2	327.2	325.0
LW. TEMP	512.5	1254.0	373.6	590.1	312.9	307.7	309.6	309.6	308.4
FL. TEMP	651.7	1823.5	420.8	776.1	321.1	312.4	315.6	315.6	313.6
EMS(I)=	0.000E+00	1.595E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.897E+02	-5.870E+02	-6.451E+01	-7.940E+01	-1.142E+01	-4.140E+00	-2.968E+00	-2.968E+00	-3.586E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-7.332E+01	-5.661E+00	-8.404E+01	-2.030E+01	-4.774E+01	-1.926E+01	-1.364E+01	-1.364E+01	-1.654E+01
	7.211E+00	-6.826E-01	5.208E+00	2.963E-01	3.256E-01	-8.787E-02	6.442E-03	6.442E-03	-1.089E-02
Pres(kpa)	1.961E+01	1.701E+01	2.167E+01	1.923E+01	2.508E+01	3.407E+01	3.385E+01	3.385E+01	3.399E+01

UPPER LAYER SPECIES CONCENTRATION

C02 MASS	3.42	4.66	4.85	0.597	2.30	1.75	0.953	0.953	1.28
PPM	1.541E+05	2.293E+05	9.503E+04	1.434E+05	3.786E+04	2.018E+04	2.708E+04	2.708E+04	2.391E+04
CO MASS	6.407E-02	8.737E-02	9.096E-02	1.119E-02	4.317E-02	3.275E-02	1.786E-02	1.786E-02	2.403E-02
PPM	4.541E+03	6.757E+03	2.800E+03	4.226E+03	1.116E+03	595.	798.	798.	704.
OD MASS	4.271E-02	5.825E-02	6.064E-02	7.463E-03	2.878E-02	2.184E-02	1.191E-02	1.191E-02	1.602E-02
1/M	4.33	3.17	3.85	3.74	2.32	1.41	1.81	1.81	1.63

TIME = 1000.0 SECONDS.

U. TEMP.	844.9	1505.2	603.2	881.8	413.7	366.6	382.2	382.2	375.4
L. TEMP.	620.0	1546.5	412.3	710.8	316.9	314.0	316.3	316.3	313.3
U. VOLUM.	35.7	64.4	56.3	7.1	43.8	54.9	23.0	23.0	34.5
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	636.0	1487.4	446.9	718.7	341.9	322.5	328.0	328.0	324.0
UW. TEMP	636.0	1487.4	446.9	718.7	341.9	322.5	328.0	328.0	325.8
LW. TEMP	507.2	1091.6	376.0	564.3	314.1	308.1	310.3	310.3	308.9
FL. TEMP	632.5	1485.5	421.9	716.4	322.8	312.9	316.5	316.5	314.2
EMS(I)=	0.000E+00	7.460E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.300E+02	-1.411E+02	-5.009E+01	-4.699E+01	-1.023E+01	-3.939E+00	-2.767E+00	-2.767E+00	-3.384E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-6.019E+01	-2.155E+00	-7.231E+01	-1.607E+01	-4.306E+01	-1.813E+01	-1.257E+01	-1.257E+01	-1.539E+01
	3.364E-01	-4.264E-01	8.772E-01	-1.075E-01	2.290E-01	-1.402E-02	1.722E-03	1.722E-03	3.110E-02
Pres(kpa)	1.280E+01	1.058E+01	1.485E+01	1.270E+01	1.819E+01	2.729E+01	2.650E+01	2.650E+01	2.703E+01

# UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	3.17	4.35	4.58	0.553	2.38	1.99	1.05	1.05	1.44
PPM		1.274E+05	1.728E+05	8.344E+04	1.165E+05	3.823E+04	2.261E+04	2.967E+04	2.967E+04	2.657E+04
CO	MASS	5.935E-02	8.157E-02	8.591E-02	1.037E-02	4.465E-02	3.735E-02	1.972E-02	1.972E-02	2.693E-02
PPM		3.755E+03	5.092E+03	2.458E+03	3.434E+03	1.126E+03	666.	874.	874.	783.
OD	MASS	3.957E-02	5.438E-02	5.727E-02	6.914E-03	2.977E-02	2.490E-02	1.315E-02	1.315E-02	1.796E-02
1/M		3.88	2.95	3.56	3.40	2.38	1.59	2.00	2.00	1.82



TIME = 1100.0 SECONDS.

U. TEMP.	777.4	1250.6	575.2	802.8	408.1	364.6	379.1	379.1	372.6
L. TEMP.	602.2	1259.6	414.7	655.6	321.4	311.2	316.8	316.8	314.1
U. VOLUM	36.1	64.5	56.8	7.2	44.0	55.3	23.0	23.0	34.5
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	601.3	1229.4	436.9	659.6	341.0	322.6	328.1	328.1	323.9
UW. TEMP	601.3	1229.4	436.9	659.6	341.0	322.6	328.1	328.1	325.9
LW. TEMP	491.7	962.9	374.3	536.0	315.1	308.3	310.7	310.7	309.2
FL. TEMP	596.2	1225.7	415.8	654.7	324.0	312.9	316.8	316.8	314.4
EMS(I)=	0.000E+00	4.787E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-8.888E+01	-9.820E+01	-3.970E+01	-3.167E+01	-9.321E+00	-3.743E+00	-2.571E+00	-2.571E+00	-3.166E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.093E+01	-3.140E+00	-6.354E+01	-1.448E+01	-3.972E+01	-1.712E+01	-1.164E+01	-1.164E+01	-1.430E+01
	-1.403E-01	-2.095E-01	1.084E-02	-5.217E-02	7.267E-02	1.213E-01	2.765E-04	2.765E-04	7.689E-03
Pres(kpa)	7.132E+00	5.136E+00	9.015E+00	7.084E+00	1.204E+01	2.103E+01	1.996E+01	1.996E+01	2.043E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	2.91	4.15	4.29	0.518	2.42	2.19	1.12	1.12	1.55
PPM	1.068E+05	1.371E+05	7.396E+04	9.868E+04	3.819E+04	2.450E+04	3.137E+04	3.137E+04	2.845E+04
CO MASS	5.461E-02	7.790E-02	8.050E-02	9.712E-03	4.537E-02	4.098E-02	2.103E-02	2.103E-02	2.909E-02
PPM	3.146E+03	4.038E+03	2.179E+03	2.908E+03	1.125E+03	722.	924.	924.	838.
OD MASS	3.641E-02	5.193E-02	5.366E-02	6.475E-03	3.025E-02	2.732E-02	1.402E-02	1.402E-02	1.939E-02
1/M	3.53	2.82	3.31	3.16	2.41	1.73	2.13	2.13	1.97

TIME = 1200.0 SECONDS.

U. TEMP.	727.5	1089.3	555.2	746.9	404.6	363.5	377.2	377.2	371.1
L. TEMP.	575.1	1069.9	408.3	609.0	323.6	312.0	316.9	316.9	314.4
U. VOLUM	36.2	64.5	56.9	7.2	44.0	55.5	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	568.6	1052.0	427.4	611.4	340.1	322.5	327.9	327.9	323.8
UW. TEMP	568.6	1052.0	427.4	611.4	340.1	322.5	327.9	327.9	325.8
LW. TEMP	475.6	869.2	371.1	511.6	315.7	308.5	310.9	310.9	309.4
FL. TEMP	560.9	1047.2	407.6	603.9	324.6	313.0	316.9	316.9	314.5
EMS(I)=	0.000E+00	3.455E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-6.685E+01	-1.106E+02	-3.361E+01	-2.411E+01	-8.813E+00	-3.642E+00	-2.463E+00	-2.463E+00	-3.060E+00
QC(I)=	-4.651E+01	-7.448E+00	-5.860E+00	-1.419E+01	-3.796E+01	-1.663E+01	-1.115E+01	-1.115E+01	-1.378E+01
	-9.757E-02	-1.288E-01	-2.061E-02	-2.131E-02	1.933E-02	5.858E-02	4.683E-05	4.683E-05	1.856E-03
Pres(kpa)	3.161E+00	1.331E+00	4.898E+00	3.130E+00	7.684E+00	1.631E+01	1.536E+01	1.536E+01	1.580E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	2.75	4.11	4.11	0.501	2.47	2.36	1.18	1.18	1.66
PPM	9.396E+04	1.180E+05	6.812E+04	8.858E+04	3.856E+04	2.630E+04	3.290E+04	3.290E+04	3.022E+04
CO MASS	5.154E-02	7.699E-02	7.703E-02	9.397E-03	4.628E-02	4.427E-02	2.216E-02	2.216E-02	3.104E-02
PPM	2.768E+03	3.476E+03	2.007E+03	2.610E+03	1.136E+03	775.	969.	969.	891.
OD MASS	3.436E-02	5.133E-02	5.135E-02	6.264E-03	3.085E-02	2.951E-02	1.478E-02	1.478E-02	2.069E-02
1/M	3.32	2.79	3.16	3.05	2.45	1.86	2.24	2.24	2.10



TIME = 1300.0 SECONDS.

U. TEMP.	688.0	968.3	540.4	704.2	402.8	363.5	376.4	376.4	370.6
L. TEMP.	542.1	937.4	401.9	568.3	324.4	312.7	316.9	316.9	314.4
U. VOLUM	36.2	64.4	57.0	7.2	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	539.4	914.7	418.9	571.3	339.3	322.5	327.7	327.7	323.6
UW. TEMP	539.4	914.7	418.9	571.3	339.3	322.5	327.7	327.7	325.8
LW. TEMP	460.3	789.6	367.5	489.8	316.1	308.7	311.1	311.1	309.5
FL. TEMP	529.3	909.0	399.4	561.7	324.8	313.1	316.9	316.9	314.5
EMS(I)=	0.000E+00	4.486E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.327E+01	-1.074E+02	-2.976E+01	-1.966E+01	-8.580E+00	-3.646E+00	-2.422E+00	-2.422E+00	-3.034E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.426E+01	-1.317E+01	-5.582E+01	-1.446E+01	-3.729E+01	-1.667E+01	-1.097E+01	-1.097E+01	-1.366E+01
	-6.359E-02	-1.967E-01	-1.760E-02	-1.073E-02	4.339E-03	1.501E-02	4.908E-06	4.908E-06	3.219E-04
Pres(kpa)	7.585E-01	-8.748E-01	2.331E+00	7.368E-01	4.869E+00	1.323E+01	1.241E+01	1.241E+01	1.283E+01

UPPER LAYER SPECIES CONCENTRATION

	2.68	4.14	4.03	0.497	2.54	2.53	1.24	1.24	1.75
CO2 MASS	8.637E+04	1.057E+05	6.498E+04	8.277E+04	3.942E+04	2.814E+04	3.442E+04	3.442E+04	3.199E+04
CO MASS	5.017E-02	7.756E-02	7.559E-02	9.322E-03	4.756E-02	4.746E-02	2.324E-02	2.324E-02	3.289E-02
PPM	2.545E+03	3.115E+03	1.914E+03	2.439E+03	1.161E+03	829.	1.014E+03	1.014E+03	942.
OD MASS	3.345E-02	5.171E-02	5.040E-02	6.215E-03	3.171E-02	3.164E-02	1.549E-02	1.549E-02	2.193E-02
1/M	3.23	2.81	3.09	3.02	2.52	1.99	2.35	2.35	2.22

U. TEMP.	652.2	866.5	526.6	663.2	401.3	364.2	376.2	376.2	370.8
L. TEMP.	509.6	857.5	394.2	531.1	324.5	313.1	316.9	316.9	314.5
U. VOLUM	36.3	64.1	57.0	7.2	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	513.5	804.1	411.2	537.0	338.6	322.6	327.6	327.6	323.5
UW. TEMP	513.5	804.1	411.2	537.0	338.6	322.6	327.6	327.6	325.8
LW. TEMP	445.7	719.5	363.9	469.7	316.3	308.9	311.2	311.2	309.7
FL. TEMP	501.4	797.1	391.8	525.6	324.7	313.3	316.9	316.9	314.5
EMS(1)=	0.000E+00	7.060E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(1)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(1)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(1)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(1)=	-4.274E+01	-8.731E+01	-2.644E+01	-1.558E+01	-8.386E+00	-3.705E+00	-2.415E+00	-2.415E+00	-3.049E+00
QC(1)=	-4.191E+01	-1.747E+01	-5.303E+01	-1.407E+01	-3.671E+01	-1.695E+01	-1.095E+01	-1.095E+01	-1.372E+01
	-3.290E-02	-6.150E-01	-1.265E-02	-5.557E-03	1.339E-03	5.722E-03	-3.306E-07	-3.306E-07	1.046E-04
Pres(kpa)	-5.340E-01	-1.988E+00	9.007E-01	-5.253E-01	3.263E+00	1.143E+01	1.068E+01	1.068E+01	1.109E+01

	2.66	4.13	4.03	0.498	2.62	2.70	1.30	1.30	1.85
CO <sub>2</sub> MASS									
PPM	8.120E+04	9.497E+04	6.327E+04	7.800E+04	4.057E+04	3.005E+04	3.601E+04	3.601E+04	3.378E+04
CO MASS	4.799E-02	7.750E-02	7.558E-02	9.335E-03	4.916E-02	5.063E-02	2.432E-02	2.432E-02	3.472E-02
PPM	2.393E+03	2.798E+03	1.864E+03	2.298E+03	1.195E+03	885.	1.061E+03	1.061E+03	995.
OD MASS	3.319E-02	5.167E-02	5.039E-02	6.223E-03	3.277E-02	3.376E-02	1.621E-02	1.621E-02	2.315E-02
1/M	3.20	2.82	3.09	3.03	2.60	2.12	2.46	2.46	2.34

TIME = 1500.0 SECONDS.

U. TEMP.	612.4	769.3	507.9	616.9	397.2	363.6	374.6	374.6	369.7
L. TEMP.	480.1	794.7	385.5	496.1	324.1	313.2	316.7	316.7	314.4
U. VOLUM	36.3	63.6	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	488.7	710.6	403.0	505.3	337.6	322.6	327.4	327.4	323.4
UW. TEMP	488.7	710.6	403.0	505.3	337.6	322.6	327.4	327.4	325.7
LW. TEMP	430.8	655.7	359.8	449.8	316.2	309.0	311.3	311.3	309.7
FL. TEMP	475.0	701.7	383.9	492.2	324.2	313.3	316.7	316.7	314.4
EMS(I)=	0.000E+00	6.722E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-3.220E+01	-5.743E+01	-2.205E+01	-1.129E+01	-7.811E+00	-3.644E+00	-2.329E+00	-2.329E+00	-2.974E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.750E+01	-1.745E+01	-4.779E+01	-1.255E+01	-3.454E+01	-1.664E+01	-1.056E+01	-1.056E+01	-1.337E+01
	-1.698E-02	-1.270E+00	-6.761E-03	-2.827E-03	6.421E-04	3.452E-03	-1.775E-07	-1.775E-07	4.836E-05
Pres(kpa)	-2.063E+00	-3.350E+00	-7.410E-01	-2.007E+00	1.461E+00	9.277E+00	8.582E+00	8.582E+00	8.964E+00

UPPER LAYER SPECIES CONCENTRATION

	2.63	4.07	4.03	0.495	2.69	2.84	1.34	1.34	1.93
CO2 MASS	7.553E+04	8.366E+04	6.093E+04	7.209E+04	4.117E+04	3.155E+04	3.715E+04	3.715E+04	3.511E+04
PPM	4.934E-02	7.627E-02	7.549E-02	9.276E-03	5.041E-02	5.326E-02	2.520E-02	2.520E-02	3.620E-02
CO MASS	2.225E+03	2.465E+03	1.795E+03	2.124E+03	1.213E+03	930.	1.095E+03	1.095E+03	1.035E+03
PPM	3.289E-02	5.085E-02	5.032E-02	6.184E-03	3.361E-02	3.551E-02	1.680E-02	1.680E-02	2.413E-02
OD	3.17	2.80	3.09	3.01	2.67	2.23	2.55	2.55	2.44
1/M									

EXECUTION TIME = 309.35

INPUT FAST FILE : SYS:TWO.DMP/G  
INPUT EXITT FILE : SCENSIX.EVA  
TENABS OUTPUT FILE: SCENSIX.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	156
	5	160
	3	164
	10	164

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	156
	5	160
	3	164
	10	164

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	9	0
	5	161
	5	165
	3	169
	10	170

OCCUPANT 4	ROOM NUMBER	ENTER TIME (S)
	8	0
	5	150
	9	153
	5	159
	5	163
	3	167
	10	167

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
32.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 2							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
32.	OUT	FINAL TIME		27.0	0.0	0.00	0.



## PERSON 3

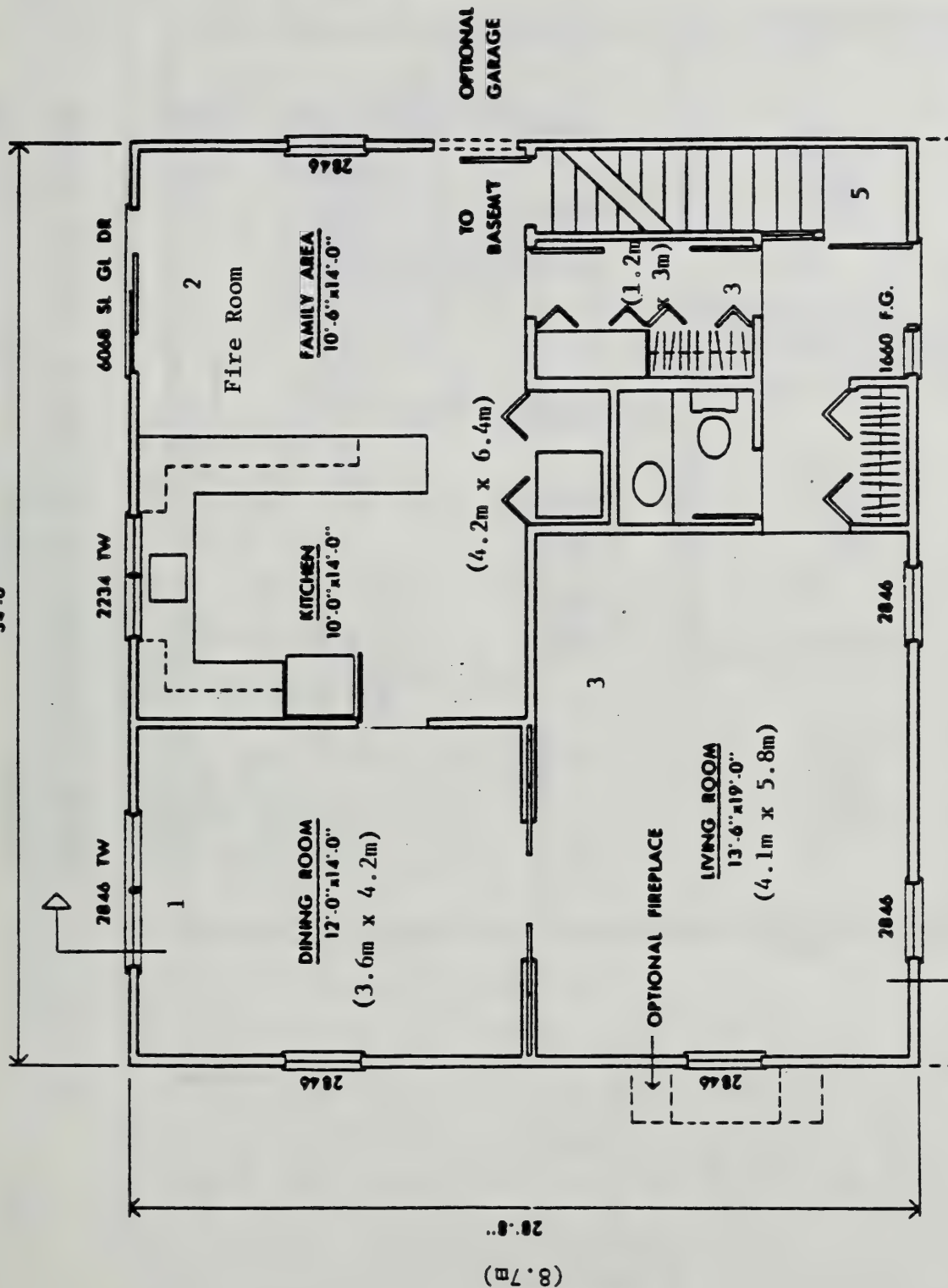
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	1.
32.	OUT	FINAL TIME		27.0	0.0	0.00	1.

## PERSON 4

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
32.	OUT	FINAL TIME		27.0	0.0	0.00	0.



(10.4m)  
34'-0"



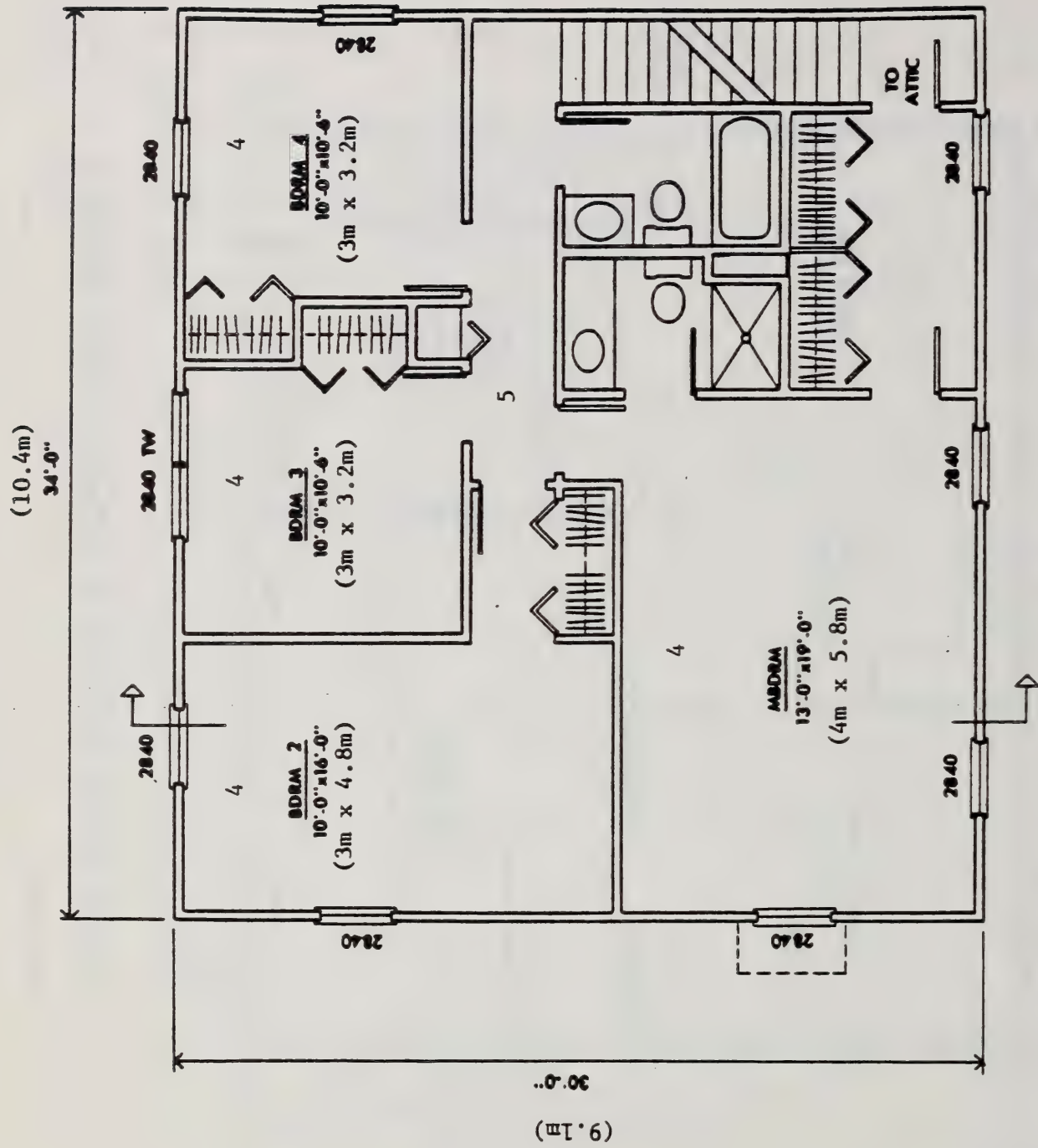
## LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE



AUG. 10, 1977

NBS

G - Floor Plan for FIRE #6  
(5 Compartments)



G.2 - Floor Plan for FIRE #6  
(5 Compartments)

UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG. 10, 1977

NBS

VERSN	017	TWO STORY HOUSE												
TIMES	1500	100	0	0	0	0	0	0	0	0	0	0	0	0
NROOM	5													
NMXOP	1													
TAMB	300													
HI/F	0.0	0.0	0.0	0.0	2.7	0.0								
WIDTH	3.6	6.4	4.6	6.0	1.0									
DEPTH	4.2	4.2	5.8	9.5	9.0									
HEIGH	2.4	2.4	2.4	2.4	4.90									
HVENT	1	2	1.1	2.1	0.0									
HVENT	1	3	1.1	2.1	0.0									
HVENT	2	3	1.1	2.1	0.0									
HVENT	4	5	.04	2.1	0.0									
HVENT	2	6	1.1	.02	0.0									
HVENT	3	5	1.1	2.1	0.0									
CEILI														
COND	.00018	.00018	.00018	.00018	.00018	.00018								
SPHT	.9	.9	.9	.9	.9									
DNSTY	790	790	790	790	790									
THICK	.016	.016	.016	.016	.016	.016								
EMISS	.9	.9	.9	.9	.9									
WALLS														
COND	.00018	.00018	.00018	.00018	.00018	.00018								
SPHT	.9	.9	.9	.9	.9									
DNSTY	790	790	790	790	790									
THICK	.016	.016	.016	.016	.016	.016								
EMISS	.9	.9	.9	.9	.9									
FLOOR														
COND	.0001	.0001	.0001	.0001	.0001	.0001								
SPHT	1.4	1.4	1.4	1.4	1.4									
DNSTY	300	300	300	300	300									
THICK	.0127	.0127	.0127	.0127	.0127	.0127								
EMISS	1.0	1.0	1.0	1.0	1.0									
LFBO	2													
LFBT	1													
LFPOS	1													
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	18100	300						
LFMAX	13													
FTIME	100	50	65	75	110	30	50	120	40	40	150	180	490	
FMASS	0.0	.004	.008	.032	.165	.153	.224	.245	.199	.376	.376	.122	.041	0.0
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

H - INPUT FOR FAST (5 COMPARTMENTS)



I. OUTPUT - COMPUTER FILES FOR FIRE #6 (5 Compartments)



TWO STORY HOUSE

TOTAL COMPARTMENTS = 5  
MAXIMUM OPENINGS PER PAIR = 1

FLOOR PLAN

WIDTH	3.6	6.4	4.6	6.0	1.0
DEPTH	4.2	4.2	5.8	9.5	9.0
HEIGHT	2.4	2.4	2.4	2.4	4.9
AREA	15.1	26.9	26.7	57.0	9.0
VOLUME	36.3	64.5	64.0	136.8	44.1
CEILING	2.4	2.4	2.4	5.1	4.9
FLOOR	0.0	0.0	0.0	2.7	0.0

CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00
	HH=	0.00	2.10	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	2.10	2.10	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	1.10	0.00	0.00	1.10
	HH=	2.10	0.00	2.10	0.00	0.00	0.02
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	0.00	2.10	0.00	0.00	0.02
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	1.10	0.00	0.00	1.10	0.00
	HH=	2.10	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.04	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00
5 ( 1 )	BW=	0.00	0.00	1.10	0.04	0.00	0.00
	HH=	0.00	0.00	2.10	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	0.00

CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISSION=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02

THICK=	1.270E-02	1.270E-02	1.270E-02	1.270E-02
EMISS=	1.000E+00	1.000E+00	1.000E+00	1.000E+00

## UPPER WALL

	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
COND =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
SPHT =	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
DNSTY=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
THICK=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

LOWER WALL

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02
TMSS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01

**FIRE ROOM NUMBER IS 2**

TIME STEP IS 1.00 SECONDS

TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS

PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 13

NUMBER OF FIRE INTERVALS =  
TOTAL TIME INTERVAL = 1500

TOTAL TIME INTERVAL  
FIRE SOURCE = 1

FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
 AMBIENT AIR TEMPERATURE (K) = 300.  
 AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
 EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

[illegible]

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	317.1	355.4	316.8	300.2	300.9
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	17.8	30.2	26.7	1.2	20.9
UL. THICK	1.2	1.1	1.0	0.0	2.3
CE. TEMP	301.4	306.6	301.2	300.0	300.0
UW. TEMP	300.9	304.4	300.8	300.0	300.0
LW. TEMP	300.1	300.5	300.1	300.0	300.0
FL. TEMP	300.2	300.9	300.2	300.0	300.0
PLUME	0.000E+00	5.535E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	7.132E-03	2.213E-02	6.863E-03	9.104E-05	4.885E-04
	8.185E-03	3.862E-02	8.251E-03	5.898E-05	9.948E-05
QSCW	9.640E-02	4.115E-01	9.596E-02	2.660E-04	2.012E-03
	-2.165E-04	-2.061E-03	-1.939E-04	-8.984E-06	2.000E-08

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.046E+05	2.012E+05	2.047E+05	2.069E+05	2.069E+05
CO2 PPM	1.721E+03	4.243E+03	1.651E+03	50.9	95.6
CO PPM	50.7	125.	48.6	1.50	2.82
OD 1/M	0.127	0.280	0.122	3.971E-03	7.439E-03
CT GM/M3	1.01	2.99	0.886	1.484E-02	2.740E-02



TIME = 200.0 SECONDS.

U. TEMP	389.2	487.1	372.3	303.4	325.8
L. TEMP	300.4	301.0	300.3	300.0	300.0
UL. VOLUM	31.9	52.5	56.0	72.5	42.8
UL. THICK	2.1	2.0	2.1	1.3	4.8
CE. TEMP	312.1	333.2	309.8	300.1	302.2
UW. TEMP	308.2	323.1	306.6	300.1	301.5
LW. TEMP	301.4	304.7	301.2	300.0	300.2
FL. TEMP	302.4	307.8	302.0	300.0	300.4
PLUME	0.000E+00	8.250E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	5.608E-02	1.735E-01	3.780E-02	1.612E-03	1.544E-02
	1.108E-01	3.346E-01	8.879E-02	1.699E-03	2.193E-02
QSCW	7.198E-01	1.584E+00	5.570E-01	1.213E-02	1.644E-01
	-6.047E-03	-3.078E-02	-5.061E-03	-1.977E-05	-5.658E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.942E+05	1.861E+05	1.964E+05	2.063E+05	2.023E+05
CO2 PPM	9.251E+03	1.509E+04	7.654E+03	510.	3.431E+03
CO PPM	273.	444.	226.	15.0	101.
OD 1/M	0.557	0.725	0.481	3.932E-02	0.247
CT GM/M3	8.06	14.4	7.31	0.235	2.07

THE FIRE BECAME VENTILATION CONTROLLED AT 293. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 300.0 SECONDS.

U. TEMP	775.0	1334.7	677.6	326.4	480.3
L. TEMP	372.8	748.4	345.0	301.0	311.2
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	412.8	714.7	383.4	303.5	332.7
UW. TEMP	384.9	665.1	359.6	302.4	322.9
LW. TEMP	342.7	574.9	326.5	300.6	306.7
FL. TEMP	374.4	758.1	344.6	301.0	311.4
PLUME	0.000E+00	1.639E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.639E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.967E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	1.670E+00	1.688E+01	8.953E-01	9.662E-03	2.151E-01
	2.565E+00	1.437E+01	1.577E+00	3.241E-02	4.112E-01
	3.710E+00	5.234E+00	3.062E+00	1.566E-01	1.510E+00
QSCW	-2.331E-04	3.014E-04	1.525E-04	-1.109E-06	-2.198E-05

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	7.754E+04	0.000E+00	1.168E+05	2.138E+05	1.648E+05
CO2 PPM	1.184E+05	1.883E+05	8.649E+04	5.704E+03	4.797E+04
CO PPM	3.488E+03	5.548E+03	2.548E+03	168.	1.413E+03
OD 1/M	3.58	3.30	2.99	0.409	2.34
CT GM/M3	45.6	55.1	39.2	5.35	24.6

TIME = 400.0 SECONDS.

U. TEMP	825.5	1426.5	722.1	324.2	510.1
L. TEMP	474.9	1069.8	405.7	302.0	330.0
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	490.8	1055.6	440.2	305.2	360.4
UW. TEMP	451.9	1007.5	407.4	303.6	344.3
LW. TEMP	402.9	784.0	365.2	301.2	318.4
FL. TEMP	469.1	1079.7	406.6	302.0	330.1
PLUME	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	2.071E+00	1.766E+01	1.092E+00	5.207E-03	2.607E-01
QSCW	3.043E+00	1.157E+01	2.008E+00	3.411E-02	5.941E-01
	3.143E+00	2.394E+00	2.735E+00	1.225E-01	1.468E+00
	1.265E-03	-4.917E-03	-4.624E-04	-7.242E-07	9.694E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.342E+04	0.000E+00	4.112E+04	2.166E+05	6.999E+04
CO2 PPM	2.747E+05	3.279E+05	2.230E+05	1.140E+04	1.676E+05
CO PPM	8.093E+03	9.660E+03	6.571E+03	336.	4.939E+03
OD 1/M	7.79	5.38	7.23	0.823	7.69
CT GM/M3	187.	162.	164.	19.6	144.

TIME = 500.0 SECONDS.

U. TEMP	954.2	1863.1	832.8	330.2	564.5
L. TEMP	594.1	1783.3	484.5	302.9	356.0
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	585.9	1671.6	504.9	307.0	386.7
UW. TEMP	535.1	1627.9	464.0	304.9	365.4
LW. TEMP	475.0	915.8	415.0	301.7	332.1
FL. TEMP	586.3	1262.9	485.3	303.0	352.2
PLUME	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	3.866E+00	1.092E+02	2.084E+00	6.500E-03	4.090E-01
QSCW	4.387E+00	-2.111E+02	3.094E+00	4.339E-02	8.810E-01
	3.216E+00	1.465E+00	3.031E+00	1.579E-01	1.727E+00
	1.658E-03	-2.855E-02	7.945E-07	-9.330E-07	8.381E-04

UPPER LAYER SPECIES CONCENTRATION						
O2	PPM	4.107E+03	0.000E+00	1.540E+04	2.242E+05	2.607E+04
CO2	PPM	4.991E+05	5.650E+05	4.294E+05	3.470E+04	3.592E+05
CO	PPM	1.470E+04	1.665E+04	1.265E+04	1.022E+03	1.058E+04
OD	1/M	12.2	7.10	12.1	2.46	14.9
CT	GM/M3	424.	312.	392.	56.5	410.

TIME = 600.0 SECONDS.

U. TEMP.	930.1	1733.9	800.9	362.8	551.1
L. TEMP.	589.1	1549.4	488.8	330.5	355.2
U. VOLUM	36.3	64.5	64.0	34.6	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	583.5	1540.0	498.5	319.4	375.8
UW. TEMP	583.5	1540.0	498.5	319.4	375.8
LW. TEMP	468.7	1031.1	409.9	305.8	330.6
FL. TEMP	590.3	1550.2	489.2	310.0	352.6
EMS(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.389E+02	-1.975E+03	-2.028E+02	-5.560E+00	-4.706E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.149E+02	-4.943E+01	-1.600E+02	-2.364E+01	-1.200E+02
	2.383E-02	5.821E-03	7.769E-03	-6.337E+00	3.576E-03
Pres(kpa)	2.082E+01	1.898E+01	2.149E+01	4.790E+01	2.361E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.23	5.78	6.81	1.82	4.47
PPM	1.845E+05	2.642E+05	1.449E+05	3.248E+04	9.502E+04
CO MASS	7.936E-02	0.108	0.128	3.415E-02	8.386E-02
PPM	5.436E+03	7.783E+03	4.270E+03	957.	2.800E+03
OD MASS	5.291E-02	7.226E-02	8.518E-02	2.277E-02	5.591E-02
1/M	5.10	3.92	4.66	2.30	4.44

TIME = 700.0 SECONDS.

U. TEMP.	1059.9	2315.3	905.0	367.7	594.1
L. TEMP.	695.7	2182.2	559.7	331.8	372.1
U. VOLUM	36.3	64.5	64.0	36.1	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	679.5	2176.1	558.5	321.2	393.7
UW. TEMP	679.5	2176.1	558.5	321.2	393.7
LW. TEMP	533.1	1409.0	452.7	306.7	341.3
FL. TEMP	696.7	2183.0	560.0	311.2	370.3
EMS(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.193E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.950E+02	-3.653E+03	-3.314E+02	-6.169E+00	-6.541E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.183E+02	-2.573E+01	-1.764E+02	-2.591E+01	-1.366E+02
	1.460E-02	3.901E-03	4.888E-03	-6.376E+00	-9.172E-04
Pres(kpa)	3.251E+01	3.072E+01	3.309E+01	5.068E+01	3.509E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	4.85	6.07	7.93	2.22	5.50
	PPM	2.409E+05	3.705E+05	1.906E+05	3.858E+04	1.260E+05
CO	MASS	9.097E-02	0.114	0.149	4.172E-02	0.103
	PPM	7.099E+03	1.092E+04	5.617E+03	1.137E+03	3.713E+03
OD	MASS	6.065E-02	7.591E-02	9.916E-02	2.781E-02	6.877E-02
	1/M	5.85	4.12	5.42	2.70	5.46



TIME = 800.0 SECONDS.

U. TEMP.	1065.0	2139.7	909.9	373.1	603.8
L. TEMP.	762.0	2070.4	608.2	333.2	386.9
U. VOLUM	36.3	64.5	64.0	37.6	44.1
U. DEPTH	2.4	2.4	2.4	0.7	4.9
CE. TEMP	747.6	2065.9	603.3	323.6	408.2
UW. TEMP	747.6	2065.9	603.3	323.6	408.2
LW. TEMP	576.1	1370.3	483.9	307.6	351.4
FL. TEMP	762.2	2068.9	608.3	312.5	386.2
EMS(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.663E+02	-1.583E+03	-3.188E+02	-6.837E+00	-6.839E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-9.137E+01	-1.151E+01	-1.477E+02	-2.805E+01	-1.304E+02
	2.022E-03	-2.085E-03	6.034E-04	-6.413E+00	2.255E-04
Pres(kpa)	2.516E+01	2.334E+01	2.581E+01	5.363E+01	2.799E+01

UPPER LAYER SPECIES CONCENTRATION

	5.10	6.07	8.34	2.72	5.95
CO2 MASS	2.544E+05	3.424E+05	2.015E+05	4.588E+04	1.384E+05
PPM	9.558E-02	0.114	0.156	5.094E-02	0.111
CO MASS	7.494E+03	1.009E+04	5.937E+03	1.352E+03	4.078E+03
PPM	6.372E-02	7.590E-02	0.104	3.396E-02	7.432E-02
OD MASS	6.15	4.12	5.70	3.16	5.90
1/M					

TIME = 900.0 SECONDS.

U. TEMP.	1006.5	1766.2	860.0	367.3	586.8
L. TEMP.	756.9	1714.5	608.1	331.8	395.4
U. VOLUM	36.3	64.5	64.0	36.9	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	747.8	1712.5	606.2	324.2	413.4
UW. TEMP	747.8	1712.5	606.2	324.2	413.4
LW. TEMP	579.7	1195.3	488.1	308.2	356.5
FL. TEMP	756.9	1713.5	608.1	313.2	393.0
EMS(1)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
EMP(1)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
APS(1)=	0.00	0.00	0.00	0.00	0.00
QF(1)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00
QR(1)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(1)=	-2.687E+02	-6.549E+02	-2.378E+02	-5.883E+00	-5.816E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-7.174E+01	-8.605E+00	-1.183E+02	-2.350E+01	-1.126E+02
	1.802E-04	-8.202E-04	2.149E-04	-5.807E+00	3.023E-03
Pres(kpa)	1.366E+01	1.197E+01	1.437E+01	5.201E+01	1.665E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	5.00	6.04	8.33	2.72	6.03
	PPM	2.358E+05	2.812E+05	1.901E+05	4.607E+04	1.363E+05
CO	MASS	9.376E-02	0.113	0.156	5.109E-02	0.113
	PPM	6.949E+03	8.285E+03	5.602E+03	1.358E+03	4.017E+03
OD	MASS	6.251E-02	7.551E-02	0.104	3.406E-02	7.533E-02
	1/M	6.03	4.10	5.69	3.23	5.98

TIME = 1000.0 SECONDS.

U. TEMP.	945.5	1481.3	810.1	359.8	564.4
L. TEMP.	728.7	1440.7	591.0	329.3	394.3
U. VOLUM	36.3	64.5	64.0	35.4	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	724.0	1440.9	592.7	323.2	412.5
UW. TEMP	724.0	1440.9	592.7	323.2	412.5
LW. TEMP	570.6	1064.8	483.1	308.2	357.8
FL. TEMP	728.6	1440.0	591.0	313.0	393.0
EMS(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.979E+02	-2.950E+02	-1.778E+02	-4.836E+00	-4.724E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-6.065E+01	-6.642E+00	-9.978E+01	-1.898E+01	-9.643E+01
	-1.115E-04	-5.058E-04	-1.675E-05	-5.052E+00	1.692E-03
Pres(kpa)	5.450E+00	3.922E+00	6.205E+00	4.847E+01	8.522E+00

UPPER LAYER SPECIES CONCENTRATION

	4.89	6.20	8.29	2.56	6.01
CO2 MASS	2.166E+05	2.420E+05	1.784E+05	4.426E+04	1.308E+05
PPM	9.168E-02	0.116	0.155	4.796E-02	0.113
CO MASS	6.382E+03	7.131E+03	5.255E+03	1.304E+03	3.855E+03
PPM	6.112E-02	7.749E-02	0.104	3.197E-02	7.516E-02
OD	5.90	4.20	5.67	3.17	5.97
1/M					

TIME = 1100.0 SECONDS.

U. TEMP.	896.5	1299.1	772.5	354.2	548.5
L. TEMP.	692.6	1243.2	569.0	327.1	389.9
U. VOLUM	36.3	64.5	64.0	33.9	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	691.0	1234.8	573.1	321.7	408.9
UW. TEMP	691.0	1234.8	573.1	321.7	408.9
LW. TEMP	556.2	963.4	474.4	308.1	357.3
FL. TEMP	692.4	1233.6	568.3	312.4	389.9
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.580E+02	-3.074E+02	-1.441E+02	-4.151E+00	-4.076E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.686E+01	-1.367E+01	-9.176E+01	-1.618E+01	-8.756E+01
	-1.347E-04	-3.538E-02	-1.356E-05	-4.489E+00	-1.443E-06
Pres(kpa)	9.241E-01	-4.246E-01	1.674E+00	4.536E+01	3.936E+00

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.84	6.42	8.31	2.40	5.99
PPM	2.034E+05	2.199E+05	1.704E+05	4.267E+04	1.267E+05
CO MASS	9.082E-02	0.120	0.156	4.502E-02	0.112
PPM	5.994E+03	6.480E+03	5.020E+03	1.257E+03	3.734E+03
OD MASS	6.055E-02	8.028E-02	0.104	3.002E-02	7.492E-02
1/M	5.84	4.36	5.67	3.10	5.95

TIME = 1200.0 SECONDS.

U. TEMP.	873.7	1215.3	756.2	351.9	542.2
L. TEMP.	666.9	1188.6	553.5	326.1	387.1
U. VOLUM	36.3	64.4	64.0	33.2	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	667.0	1115.6	558.7	320.6	406.3
UW. TEMP	667.0	1115.6	558.7	320.6	406.3
LW. TEMP	546.3	902.8	468.4	307.9	356.9
FL. TEMP	666.8	1115.2	552.0	311.8	387.1
EMS(I)=	0.000E+00	6.125E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.457E+02	-3.699E+02	-1.334E+02	-3.920E+00	-3.858E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.848E+01	-2.588E+01	-9.197E+01	-1.539E+01	-8.515E+01
	-1.293E-04	-5.705E-01	4.387E-03	-4.291E+00	-4.313E-06
Pres(kpa)	-6.405E-01	-1.892E+00	1.064E-01	4.402E+01	2.347E+00

UPPER LAYER SPECIES CONCENTRATION					
	4.85	6.60	8.33	2.33	5.99
CO2 MASS	1.984E+05	2.118E+05	1.673E+05	4.199E+04	1.252E+05
PPM	9.087E-02	0.124	0.156	4.375E-02	0.112
CO MASS	5.846E+03	6.240E+03	4.928E+03	1.237E+03	3.686E+03
PPM	6.058E-02	8.251E-02	0.104	2.917E-02	7.486E-02
OD MASS	5.84	4.48	5.69	3.07	5.94
1/M					



TIME = 1300.0 SECONDS.

U TEMP.	853.4	1145.0	741.7	350.2	536.7
L TEMP.	645.3	1145.7	539.9	325.4	384.5
U. VOLUM	36.3	64.2	64.0	32.8	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE TEMP	646.6	1022.9	546.5	319.8	403.8
UW TEMP	646.6	1022.9	546.5	319.8	403.8
LW TEMP	537.2	850.2	463.0	307.7	356.3
FL TEMP	645.2	1023.2	538.3	311.3	384.5
EMS(I)=	0.000E+00	7.698E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.347E+02	-3.642E+02	-1.242E+02	-3.765E+00	-3.679E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.954E+01	-3.549E+01	-9.182E+01	-1.488E+01	-8.320E+01
	-8.989E-05	-1.208E+00	4.519E-03	-4.160E+00	-3.129E-06
Pres(kpa)	-2.052E+00	-3.225E+00	-1.305E+00	4.303E+01	9.281E-01

UPPER LAYER SPECIES CONCENTRATION

	4.85	6.74	8.35	2.28	5.97
CO2 MASS	1.940E+05	2.043E+05	1.644E+05	4.149E+04	1.236E+05
PPM	9.098E-02	0.126	0.156	4.280E-02	0.112
CO MASS	5.716E+03	6.018E+03	4.843E+03	1.222E+03	3.642E+03
PPM	6.065E-02	8.426E-02	0.104	2.853E-02	7.468E-02
OD MASS	5.85	4.59	5.70	3.05	5.93
1/M					

TIME = 1400.0 SECONDS.

U.TEMP.	830.8	1075.2	725.5	348.6	530.6
L.TEMP.	624.2	1105.8	526.8	324.7	381.8
U.VOLUM	36.3	64.0	64.0	32.3	44.1
U.DEPTH	2.4	2.4	2.4	0.6	4.9
CE.TEMP	626.8	940.3	534.6	318.9	401.2
UW.TEMP	626.8	940.3	534.6	318.9	401.2
LW.TEMP	527.0	798.7	456.9	307.5	355.5
FL.TEMP	624.1	940.6	525.2	310.8	381.8
EMS(I)=	0.000E+00	7.740E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.222E+02	-3.233E+02	-1.138E+02	-3.610E+00	-3.482E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.962E+01	-4.245E+01	-9.052E+01	-1.433E+01	-8.088E+01
	-6.847E-05	-1.957E+00	4.681E-03	-4.031E+00	-3.075E-06
Pres(kpa)	-3.645E+00	-4.728E+00	-2.901E+00	4.202E+01	-6.897E-01

UPPER LAYER SPECIES CONCENTRATION

C02	MASS	4.86	6.87	8.36	2.23	5.95
	PPM	1.891E+05	1.960E+05	1.610E+05	4.099E+04	1.217E+05
CO	MASS	9.109E-02	0.129	0.157	4.184E-02	0.112
	PPM	5.572E+03	5.776E+03	4.743E+03	1.208E+03	3.586E+03
OD	MASS	6.073E-02	8.586E-02	0.104	2.789E-02	7.436E-02
	1/M	5.86	4.69	5.71	3.03	5.90

TIME = 1500.0 SECONDS.

U. TEMP.	807.0	1008.3	708.3	346.9	524.0
L. TEMP.	603.3	1069.8	513.8	324.0	379.0
U. VOLUM	36.3	63.7	64.0	31.7	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	607.2	865.8	522.8	318.2	398.4
UW. TEMP	607.2	865.8	522.8	318.2	398.4
LW. TEMP	516.0	749.3	450.1	307.3	354.3
FL. TEMP	603.2	865.6	512.2	310.4	379.0
EMS(I)=	0.000E+00	5.978E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.094E+02	-2.745E+02	-1.032E+02	-3.457E+00	-3.277E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.921E+01	-4.780E+01	-8.862E+01	-1.377E+01	-7.836E+01
	-5.302E-05	-2.884E+00	4.877E-03	-3.903E+00	-3.200E-06
Pres(kpa)	-5.338E+00	-6.329E+00	-4.599E+00	4.102E+01	-2.414E+00

# UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.86	6.98	8.36	2.18	5.92
PPM	1.839E+05	1.877E+05	1.573E+05	4.049E+04	1.195E+05
CO MASS	9.121E-02	0.131	0.157	4.087E-02	0.111
PPM	5.419E+03	5.531E+03	4.633E+03	1.193E+03	3.522E+03
OD MASS	6.081E-02	8.725E-02	0.105	2.725E-02	7.396E-02
1/M	5.86	4.79	5.71	3.00	5.87

EXECUTION TIME = 170.31



FIRE #7

COUCH AND PANELLING

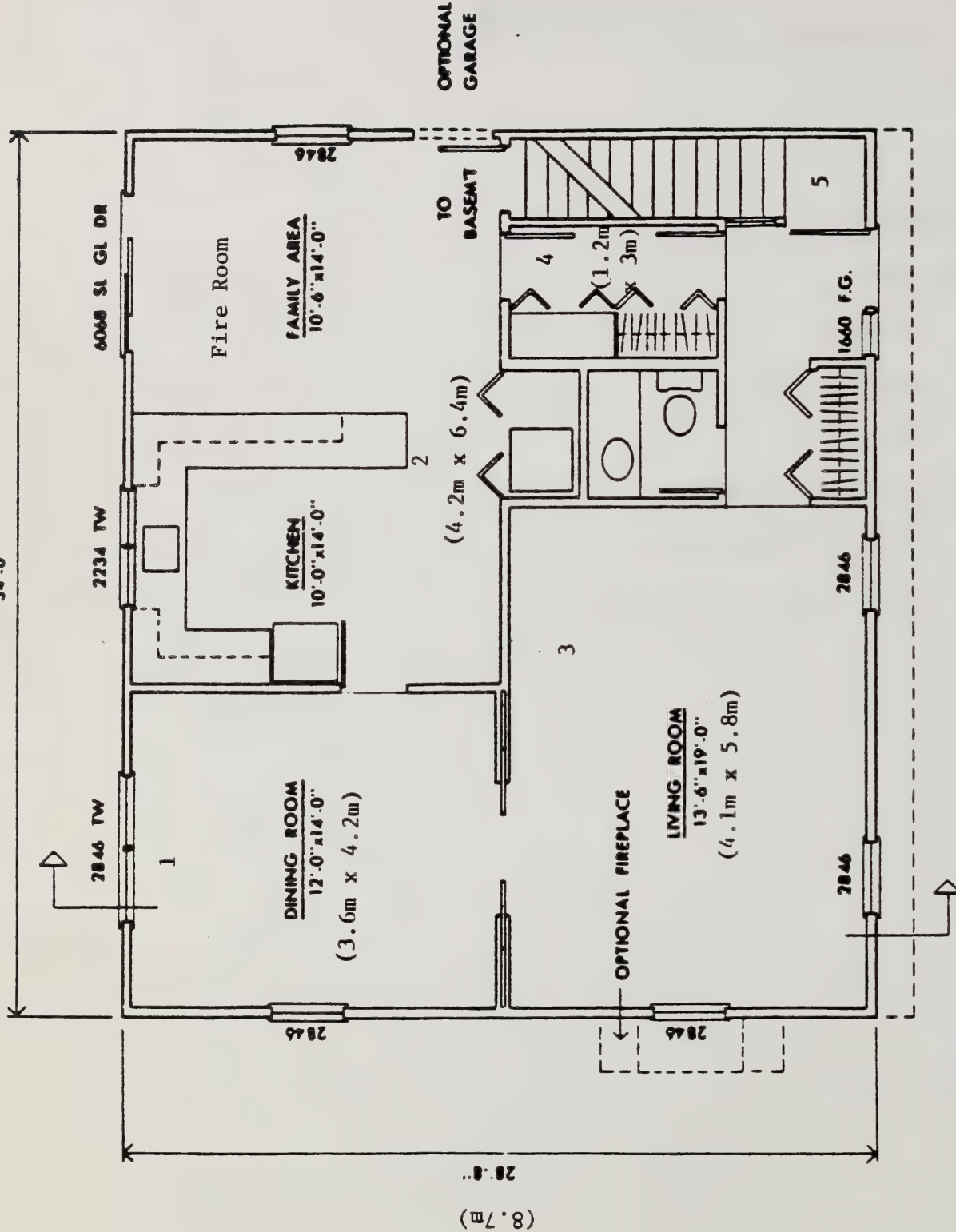
(Passageway between kitchen and family room closed)

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)



(10.4m)

34'-0"



# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

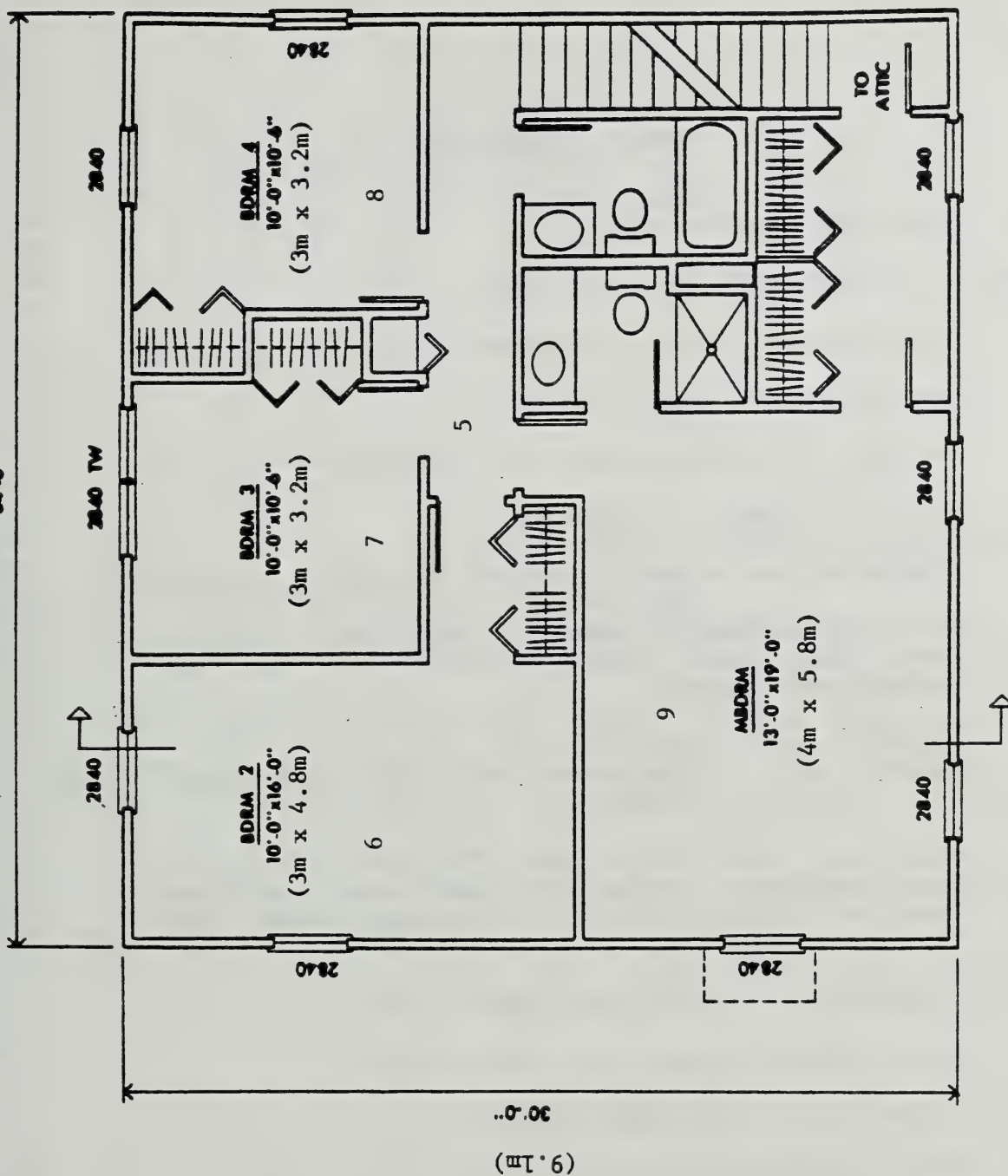
AUG. 10, 1977



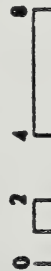
NBS

A.1 - Floor Plan for FIRE #7

(10.4m)  
34'-0"



# UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE



AUG. 10, 1977

NBS

A.2 - Floor Plan for Fire #7

B. FUEL LOAD BACKGROUND FOR FIRE #7

FIRE 7 - FAMILY ROOM

BUILDING: Two-story detached house

OCCUPANTS: All fully capable except as noted.

Father aged 45 asleep in bedroom 1.

Mother aged 40 asleep in bedroom 1.

Boy aged 16 asleep in bedroom 2 - sleeping penalty = 15.

Girl aged 14 asleep in bedroom 3.

FIRE: Cigarette fire in family room couch spreading to panelling.

DOORS: Doors to passageway between kitchen/family room and front hall closed, other downstairs door open, all bedroom doors closed.

FUEL: Material Code: UPS001  
Material ID: Upholstered sofa, F32, wood frame, PU foam FR olefin.

Panelling: See NBSIR 85-2988 - The Effect of Wall and Room Services on the Rate of Heat, Smoke, and Carbon Monoxide Production in a Park Lodging Bedroom Fire-Test #R5 and Tests #R2.

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Family room (first floor)

TIME TO

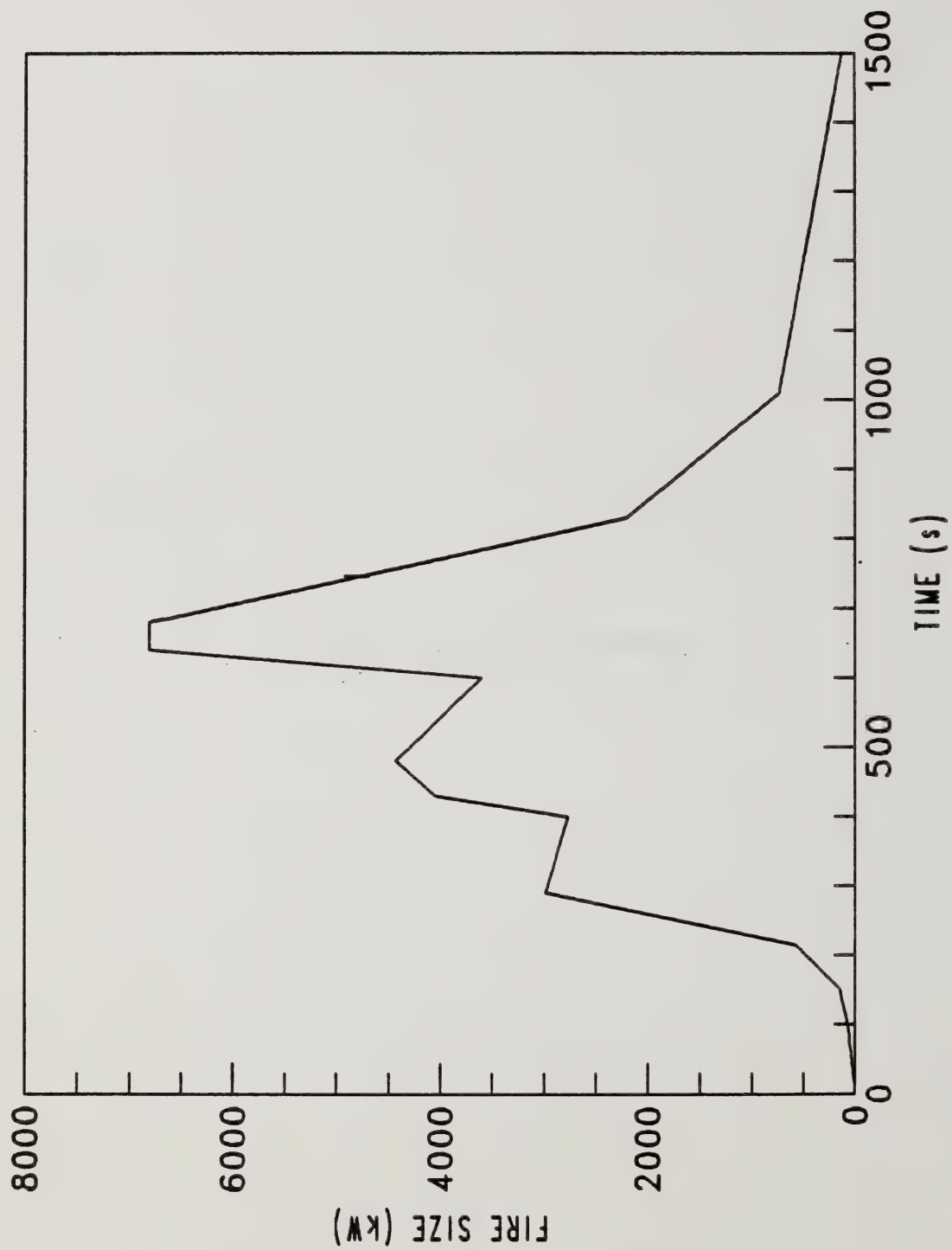
FLASHOVER: 4 minutes

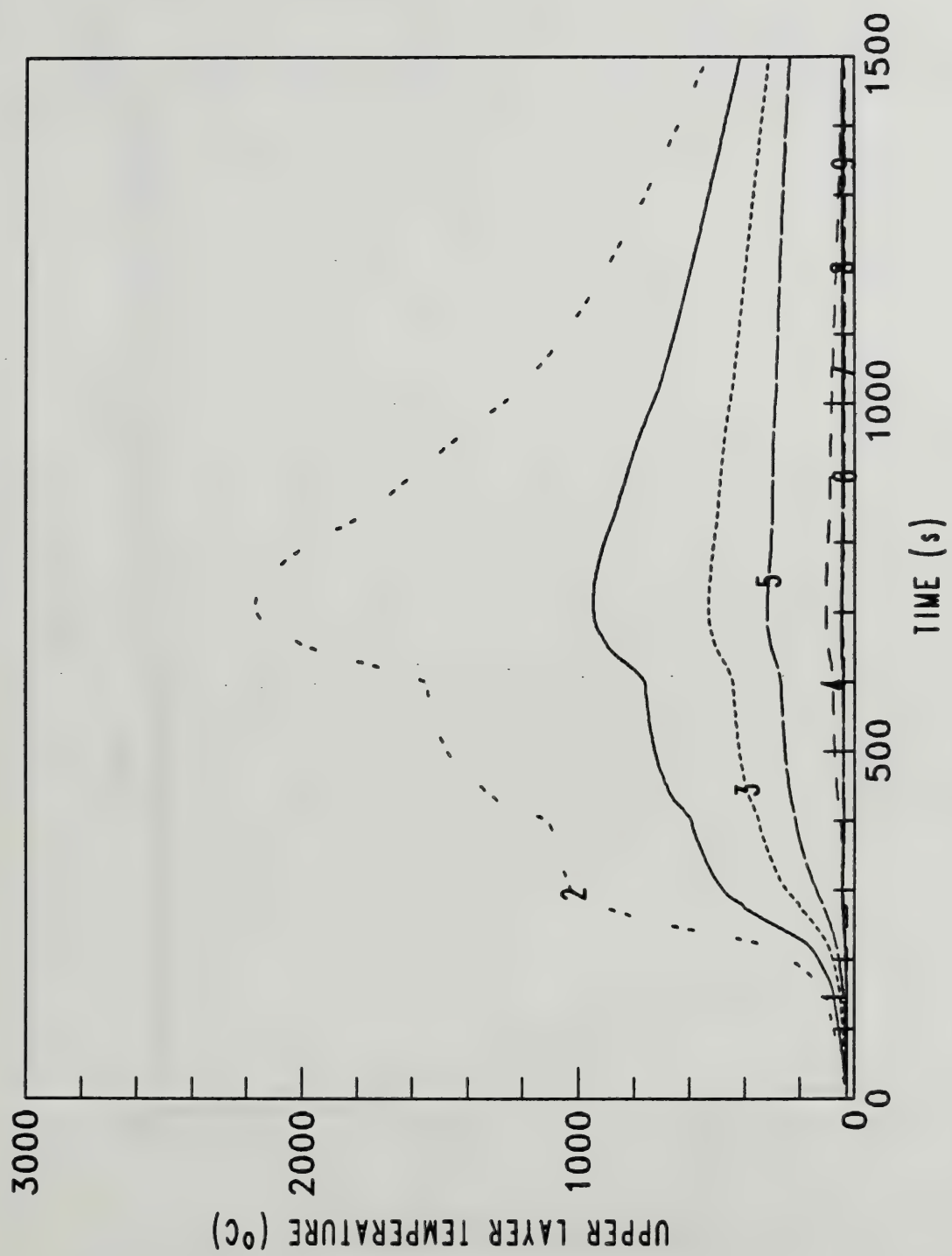
VERSN	017	TWO STORY HOUSE -PASSAGE									
TIMES	1500	100	0	0	0	0	0				
NROOM	9										
NMXOP	1										
TAMB	300										
HI/F	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7	
WIDTH	3.6	6.4	4.1	1.0	1.0	5.8	3.2	3.2	3.0		
DEPTH	4.2	4.2	5.8	3.0	9.0	4.0	3.0	3.0	4.8		
HEIGH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4		
HVENT	1	2	1.1	2.1	0.0						
HVENT	1	3	1.1	2.1	0.0						
HVENT	2	4	.01	2.1	0.0						
HVENT	3	4	.01	2.1	0.						
HVENT	3	5	1.1	2.1	0.0						
HVENT	5	6	.01	4.8	2.7						
HVENT	5	7	.01	4.8	2.7						
HVENT	5	8	.01	4.8	2.7						
HVENT	2	10	1.1	0.2	0.0						
HVENT	5	9	.01	4.8	2.7						
CEILI											
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9		
DNSTY	790	790	790	790	790	790	790	790	790	790	
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9		
WALLS											
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9		
DNSTY	790	790	790	790	790	790	790	790	790	790	
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9		
FLOOR											
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4		
DNSTY	300	300	300	300	300	300	300	300	300		
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
LFBO	2										
LFBT	1										
LFPOS	1										
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	18100	300			
LFMAX	13										
FTIME	100	50	65	75	110	30	50	120	40	40	
FMASS	0.0	.004	.008	.032	.162	.153	.224	.245	.199	.376	
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	

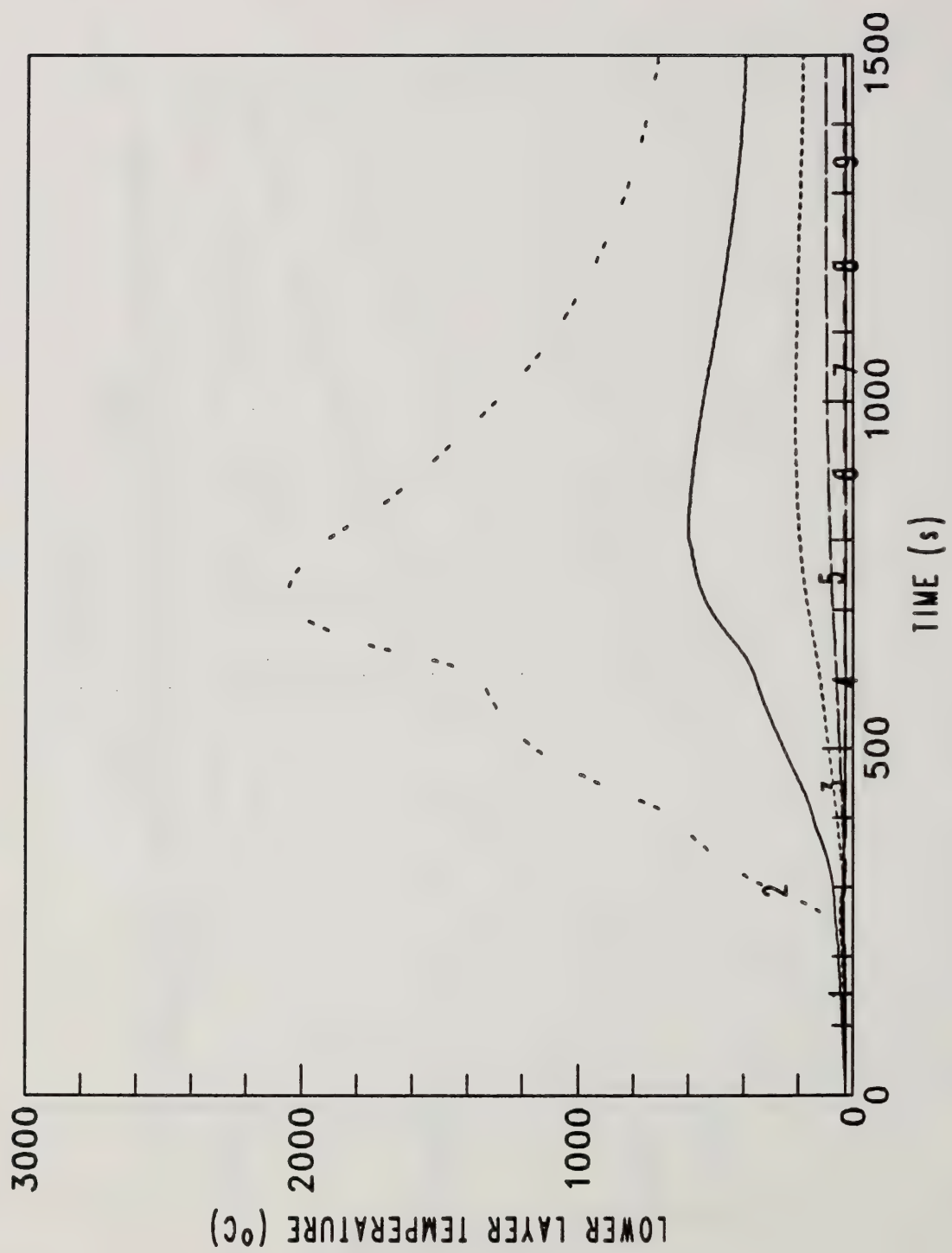


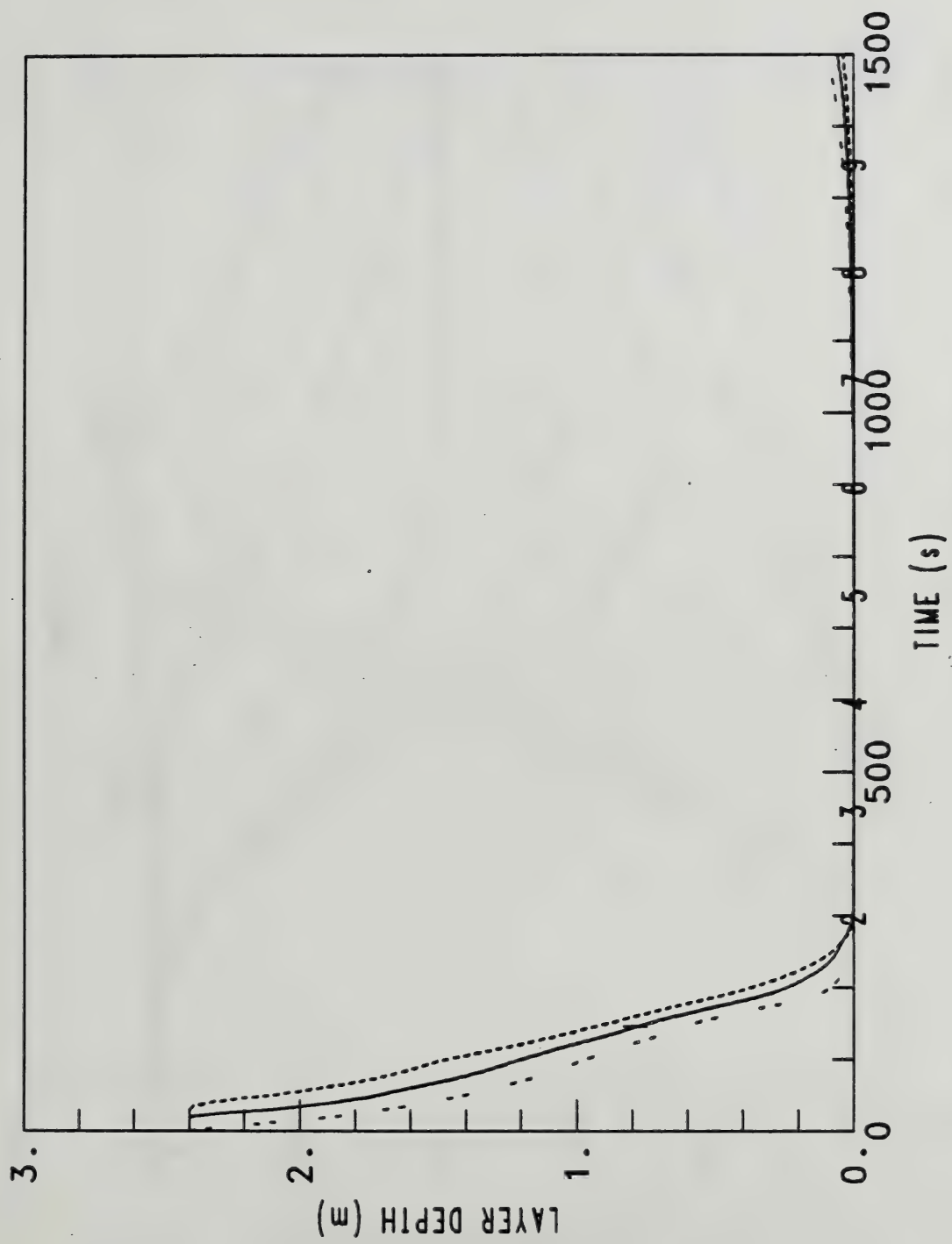


D. OUTPUT - GRAPHS FOR FIRE #7

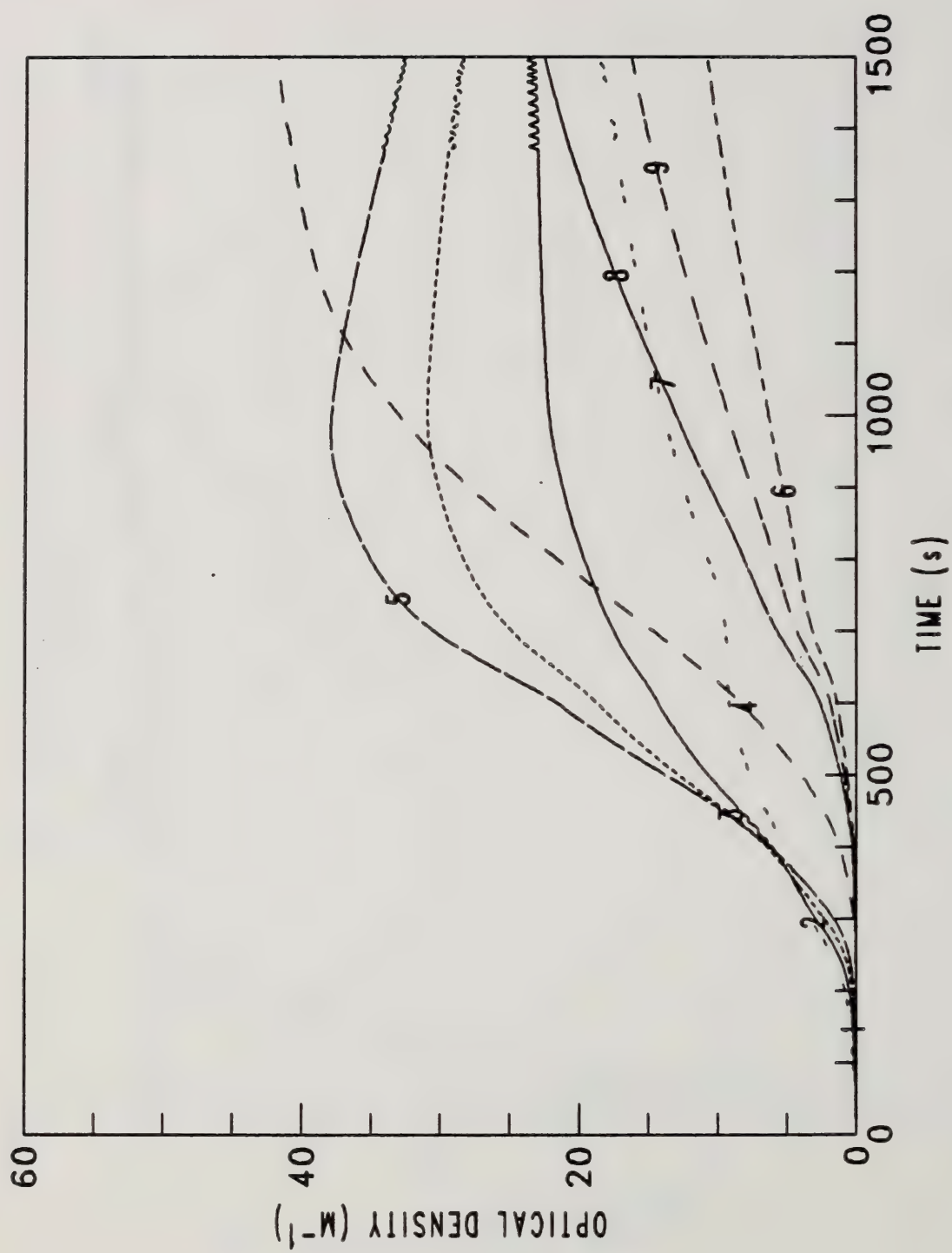


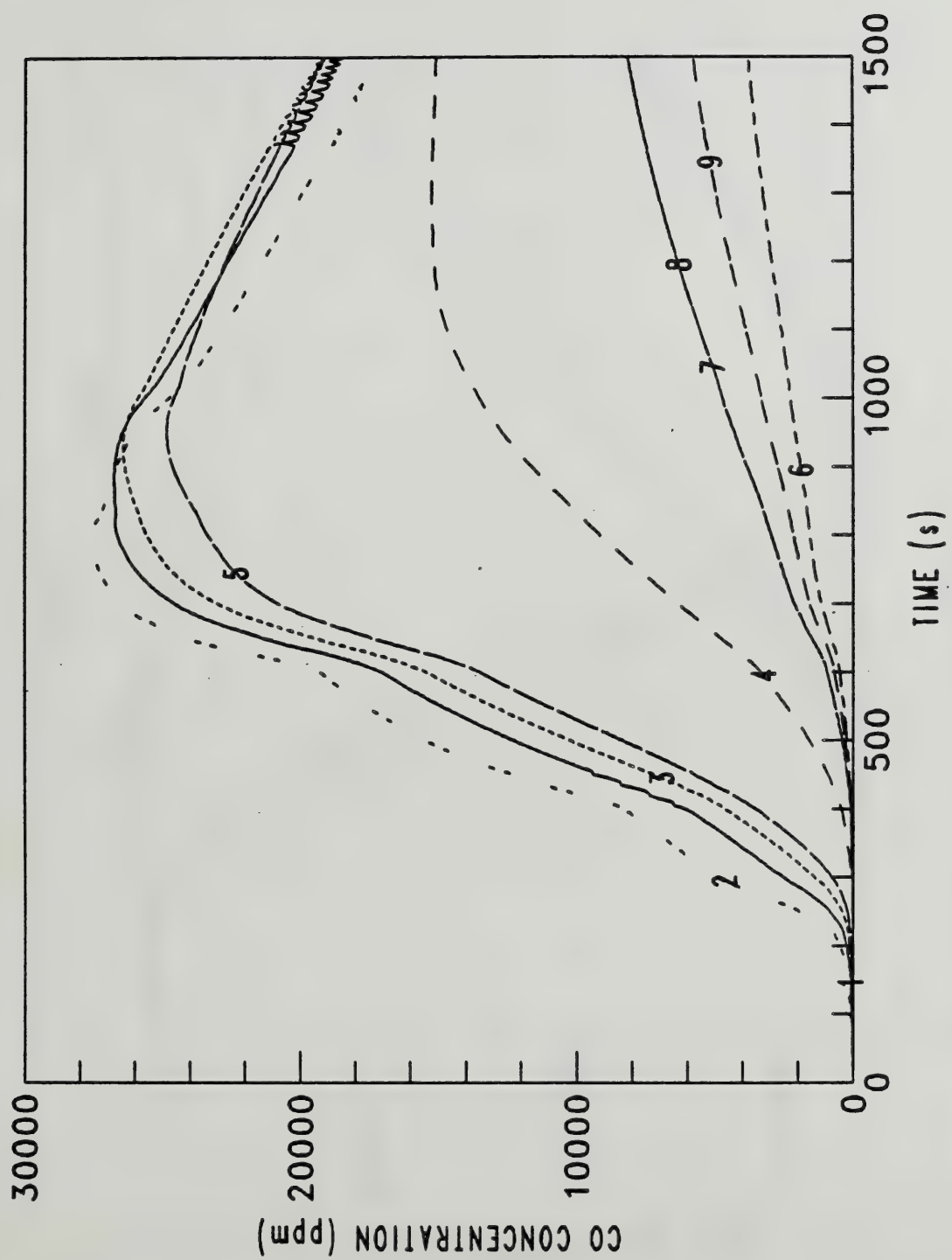


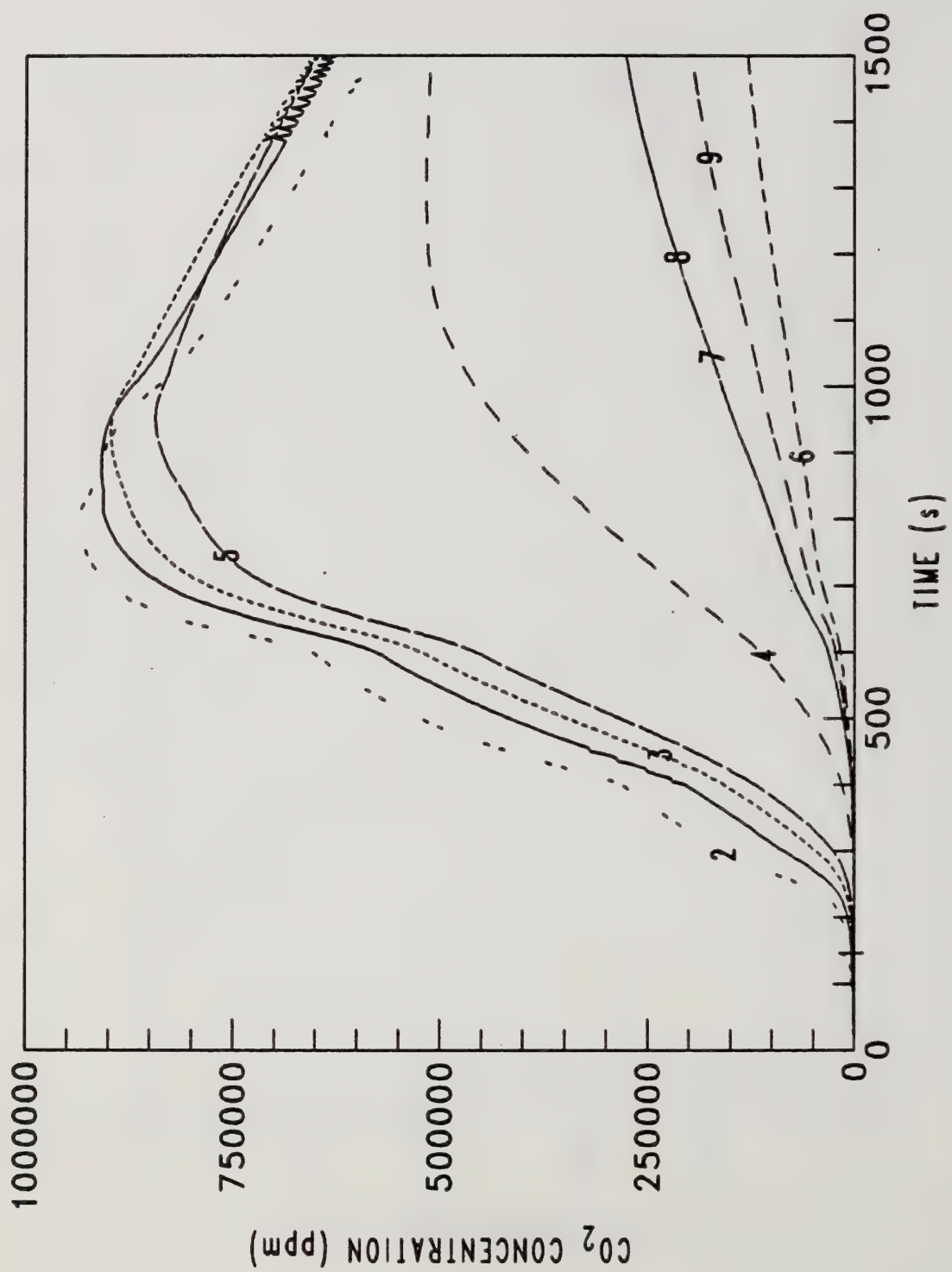


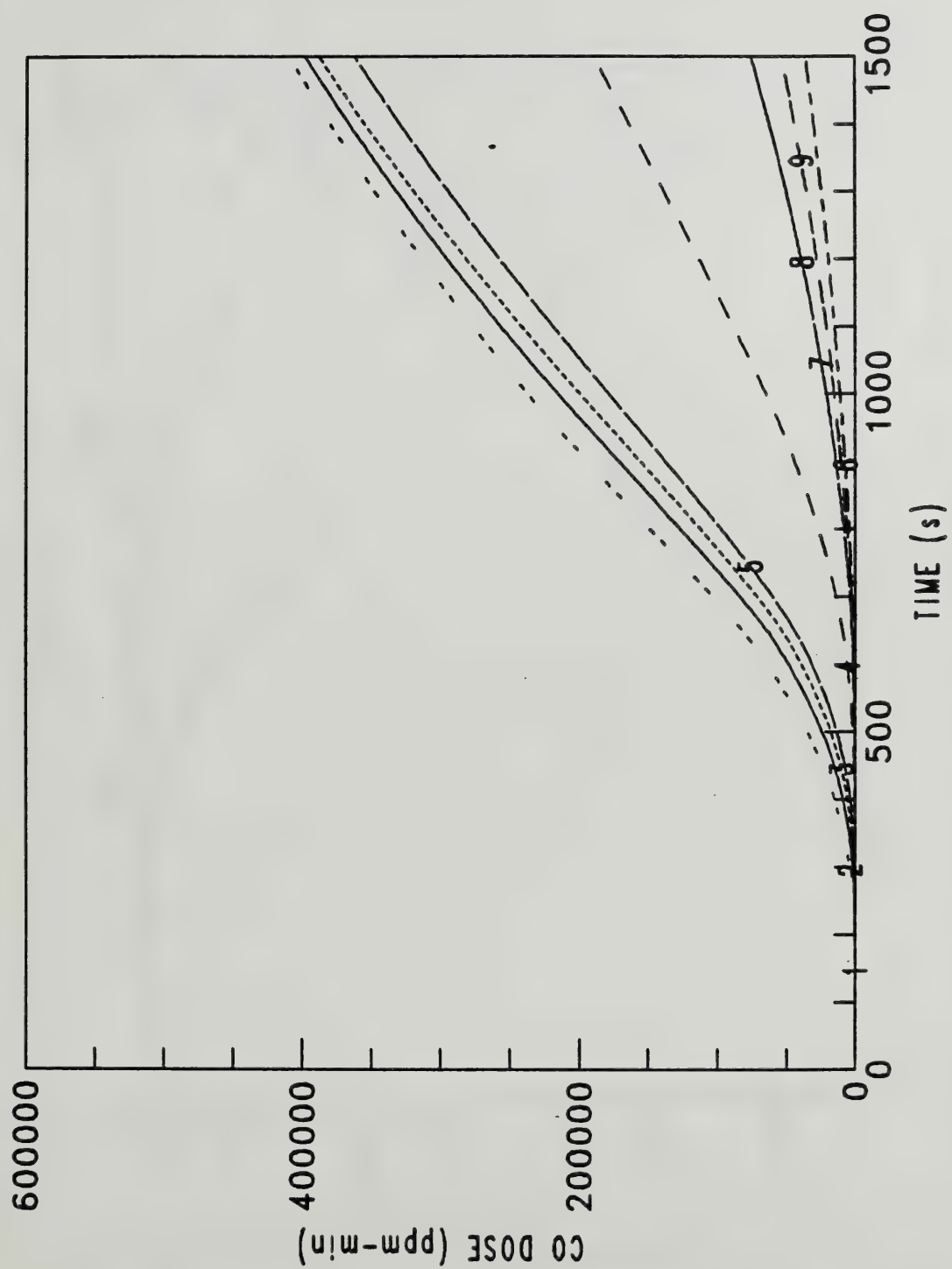


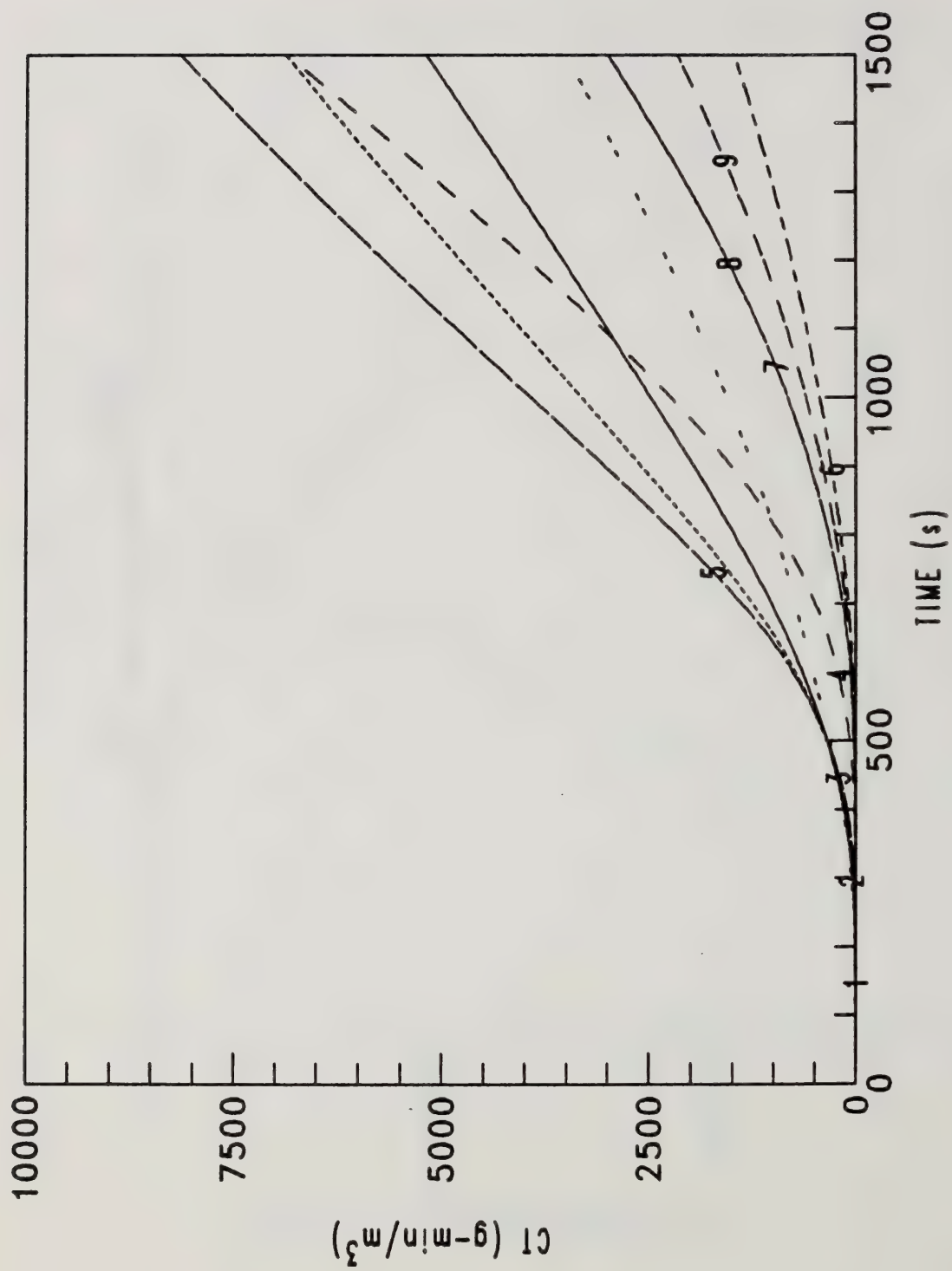




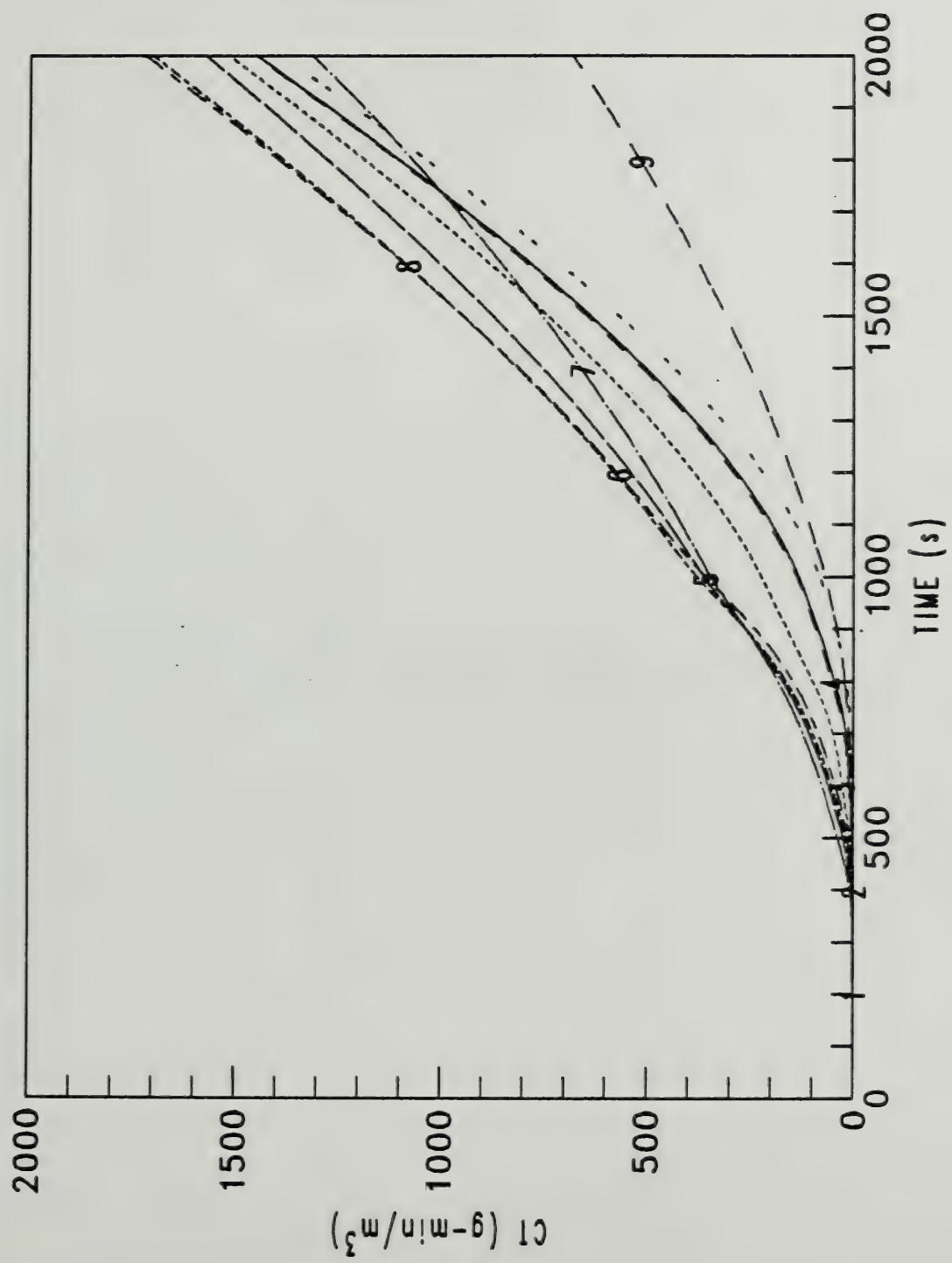














E. OUTPUT - COMPUTER FILES FOR FIRE #7

**TWO STORY HOUSE -PASSAGE**

**TOTAL COMPARTMENTS = 9**  
**MAXIMUM OPENINGS PER PAIR = 1**

## FLOOR PLAN

	3.6	6.4	4.1	1.0	5.8	3.2	3.2	3.0
WIDTH	4.2	2.2	5.8	3.0	4.0	3.0	3.2	4.8
DEPTH	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
HEIGHT	15.1	26.9	23.8	9.0	23.2	9.6	9.6	14.4
AREA	36.3	64.5	57.1	44.1	55.7	23.0	23.0	34.6
VOLUME	2.4	2.4	2.4	4.9	5.1	5.1	5.1	5.1
CEILING	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7
FLOOR								

## CONNECTIONS

[illegible]

HH= 0.00 0.00 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
  
BW= 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00  
HH= 0.00 0.00 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00

9 ( 1 )

CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 13

TOTAL TIME INTERVAL = 1500

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 4.00E-03 8.00E-03 3.20E-02 0.16 0.15 0.22 0.24 0.20 0.38 0.12 4.1  
0E-02 0.00E+00  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.0  
0E+00 0.00E+00  
02= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
4 -1.4



[illegible]



TIME = 100.0 SECONDS.

U. TEMP	320.3	355.7	305.5	325.7	300.1	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	18.5	34.6	15.9	3.7	6.3	0.0	0.0	0.0	0.0	0.0
UL. THICK	1.2	1.3	0.7	1.2	0.7	0.0	0.0	0.0	0.0	0.0
CE. TEMP	301.6	306.5	300.2	302.1	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	301.1	304.4	300.2	301.4	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.1	300.6	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.2	301.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	4.282E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	8.856E-03	2.376E-02	2.431E-03	1.362E-02	3.325E-05	5.324E-07	2.829E-07	2.829E-07	2.829E-07	4.225E-07
QSCW	1.001E-02	4.129E-02	1.935E-03	7.079E-03	3.991E-06	7.980E-07	5.109E-07	5.109E-07	5.109E-07	6.319E-07
	1.214E-01	4.158E-01	2.285E-02	1.639E-01	5.735E-05	7.867E-07	5.840E-07	5.840E-07	5.840E-07	6.957E-07
	-2.653E-04	-2.162E-03	-2.283E-05	-1.778E-04	1.380E-08	-9.333E-06	-9.134E-06	-9.134E-06	-9.134E-06	-9.226E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.042E+05	2.010E+05	2.060E+05	2.035E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2 PPM	1.997E+03	4.353E+03	698.	2.551E+03	8.65	3.31	2.84	2.84	2.84	3.12
CO PPM	58.8	128.	20.6	75.2	0.255	9.757E-02	8.371E-02	8.371E-02	8.371E-02	9.183E-02
OD 1/M	0.146	0.287	5.354E-02	0.183	6.749E-04	2.584E-04	2.217E-04	2.217E-04	2.217E-04	2.432E-04
CT GM/M3	1.08	3.01	0.309	1.48	1.308E-03	2.982E-04	2.235E-04	2.235E-04	2.235E-04	2.642E-04

TIME = 200.0 SECONDS.

U. TEMP	422.8	509.5	350.5	336.7	312.8	301.0	301.2	301.2	301.1
L. TEMP	300.3	301.3	300.1	300.1	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	29.4	57.3	45.8	7.0	41.3	19.0	7.0	7.0	10.8
UL. THICK	1.9	2.1	1.9	2.3	4.6	0.8	0.7	0.7	0.7
CE. TEMP	317.5	337.6	305.5	307.0	300.8	300.0	300.0	300.0	300.0
UW. TEMP	312.0	326.3	303.7	304.8	300.5	300.0	300.0	300.0	300.0
LW. TEMP	302.0	306.0	300.6	300.7	300.1	300.0	300.0	300.0	300.0
FL. TEMP	303.3	309.8	301.0	301.2	300.1	300.0	300.0	300.0	300.0
PLUME	0.000E+00	6.188E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	9.091E-02	2.257E-01	2.530E-02	1.744E-02	7.405E-03	5.109E-04	6.137E-04	6.137E-04	5.758E-04
	1.544E-01	4.455E-01	4.747E-02	4.920E-02	7.416E-03	3.259E-04	2.913E-04	2.913E-04	3.096E-04
QSCW	1.040E+00	1.788E+00	3.722E-01	2.183E-01	6.828E-02	2.470E-03	3.105E-03	3.105E-03	2.878E-03
	-1.022E-02	-4.134E-02	-2.171E-03	-2.717E-03	-1.033E-04	-7.646E-06	-6.932E-06	-6.932E-06	-7.287E-06

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.894E+05	1.826E+05	1.982E+05	1.987E+05	2.043E+05	2.068E+05	2.067E+05	2.067E+05	2.067E+05
CO2 PPM	1.272E+04	1.765E+04	6.378E+03	5.672E+03	1.969E+03	176.	208.	208.	197.
CO PPM	375.	520.	188.	167.	58.0	5.18	6.14	6.14	5.79
OD 1/M	0.704	0.811	0.426	0.394	0.147	1.368E-02	1.620E-02	1.620E-02	1.528E-02
CT GM/M3	9.81	15.5	5.02	9.77	0.923	7.995E-02	8.488E-02	8.488E-02	8.279E-02

THE FIRE BECAME VENTILATION CONTROLLED AT 298. SECONDS  
 CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
 SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 300.0 SECONDS.

U. TEMP	759.3	1322.7	517.5	433.1	413.0	325.1	317.5	317.5	321.6
L. TEMP	316.0	438.8	304.7	325.1	301.1	300.3	300.7	300.7	300.5
UL. VOLUM	33.3	63.7	52.7	7.2	43.1	52.5	23.0	23.0	33.8
UL. THICK	2.2	2.4	2.2	2.4	4.8	2.3	2.4	2.4	2.3
CE. TEMP	423.8	699.4	348.2	327.0	320.6	303.5	302.5	302.5	303.1
UW. TEMP	393.4	649.0	334.2	319.0	314.3	302.4	301.7	301.7	302.1
LW. TEMP	339.3	568.8	309.5	305.5	302.5	300.5	300.4	300.4	300.5
FL. TEMP	361.8	709.5	315.3	309.0	304.3	300.9	300.8	300.8	300.9
PLUME	0.000E+00	7.280E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.917E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.402E+00	1.547E+01	2.259E-01	1.152E-01	9.407E-02	9.689E-03	7.446E-03	7.446E-03	8.790E-03
	2.225E+00	1.640E+01	5.334E-01	2.682E-01	1.826E-01	2.893E-02	2.166E-02	2.166E-02	2.623E-02
QSCW	3.371E+00	5.309E+00	1.725E+00	1.029E+00	8.809E-01	1.450E-01	9.044E-02	9.044E-02	1.186E-01
	-3.813E-01	-2.976E+00	-5.609E-02	5.678E-03	-1.117E-02	-1.300E-03	-7.580E-07	-7.580E-07	-7.000E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	7.232E+04	0.000E+00	1.338E+05	1.620E+05	1.637E+05	1.989E+05	2.017E+05	2.017E+05	1.997E+05
CO2	PPM	/	9.754E+04	1.536E+05	5.297E+04	3.850E+04	3.127E+04	5.878E+03	4.501E+03	4.501E+03	5.294E+03
CO	PPM	/	2.874E+03	4.526E+03	1.561E+03	1.134E+03	921.	173.	133.	133.	156.
OD	1/M	/	3.01	2.72	2.40	2.08	1.77	0.423	0.332	0.332	0.385
CT	GM/M3	/	48.0	53.5	33.5	32.4	19.5	5.45	4.99	4.99	5.45



TIME = 400.0 SECONDS.

U. TEMP	772.8	1481.6	520.9	427.9	415.5	317.6	312.8	312.8	315.3
L. TEMP	387.8	890.6	329.8	1436.0	307.4	301.2	301.5	301.5	301.4
UL. VOLUM	35.8	64.4	56.5	7.2	43.9	53.7	23.0	23.0	34.6
UL. THICK	2.4	2.4	2.4	2.4	4.9	2.3	2.4	2.4	2.4
CE. TEMP	471.4	1095.0	367.3	341.0	331.7	304.1	302.9	302.9	303.6
UW. TEMP	434.9	1044.9	349.4	330.6	322.8	302.9	302.0	302.0	302.5
LW. TEMP	382.5	837.3	320.3	432.8	307.0	300.9	300.9	300.9	300.9
FL. TEMP	427.1	1115.9	333.1	303.3	311.4	301.5	301.2	301.2	301.4
PLUME	0.000E+00	2.467E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.438E+00	2.020E+01	2.033E-01	2.519E-01	8.670E-02	3.968E-03	4.101E-03	4.101E-03	4.242E-03
QSCW	2.692E+00	1.480E+01	6.509E-01	-1.046E+00	2.512E-01	2.421E-02	1.740E-02	1.740E-02	2.181E-02
	2.850E+00	2.470E+00	1.496E+00	7.888E-01	7.668E-01	7.834E-02	5.259E-02	5.259E-02	6.488E-02
	-2.699E-01	-1.513E+00	-1.076E-02	6.845E-01	-1.512E-02	-4.658E-04	2.561E-05	2.561E-05	-4.048E-07
UPPER LAYER SPECIES CONCENTRATION									
O2 PPM	5.015E+04	0.000E+00	8.819E+04	1.653E+05	1.119E+05	1.119E+05	1.960E+05	1.986E+05	1.971E+05
CO2 PPM	1.902E+05	3.041E+05	1.198E+05	1.316E+05	8.413E+04	8.174E+03	6.911E+03	6.911E+03	7.695E+03
CO PPM	5.605E+03	8.960E+03	3.529E+03	3.878E+03	2.479E+03	241.	204.	204.	227.
OD 1/M	5.77	4.81	5.39	7.20	4.74	0.603	0.517	0.517	0.571
CT GM/M3	153.	145.	125.	140.	94.9	17.3	14.8	14.8	16.7

TIME = 500.0 SECONDS.

U. TEMP.	912.0	1894.5	535.5	300.0	379.5	340.5	351.5	351.5	346.1
L. TEMP.	356.7	1616.2	313.0	303.9	307.8	314.5	310.4	310.4	313.0
U. VOLUM	27.9	64.2	44.0	0.0	40.9	52.0	23.0	23.0	34.0
U. DEPTH	1.8	2.4	1.9	0.0	4.5	2.2	2.4	2.4	2.4
CE. TEMP	527.4	1623.2	370.8	300.5	317.0	308.3	310.1	310.1	308.8
UW. TEMP	527.4	1623.2	370.8	300.5	317.0	308.3	310.1	310.1	309.2
LW. TEMP	393.1	1066.7	317.4	301.3	303.4	302.6	303.0	303.0	302.7
FL. TEMP	462.5	1638.9	330.2	302.2	306.0	304.5	305.1	305.1	304.7
EMS(I)=	0.000E+00	4.877E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-2.059E+02	-3.430E+03	-3.088E+01	5.175E-03	-6.533E+00	-2.287E+00	-1.681E+00	-1.681E+00	-1.977E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.164E+02	-7.312E+01	-7.495E+01	1.681E-04	-3.565E+01	-1.210E+01	-9.253E+00	-9.253E+00	-1.072E+01
	1.745E+01	8.226E-01	2.670E+00	-1.103E-01	-7.746E-02	-2.003E-01	-1.434E-02	-1.434E-02	-5.415E-02
Pres(kpa)	1.372E+01	7.872E+00	1.633E+01	1.317E+01	1.783E+01	2.385E+01	2.372E+01	2.372E+01	2.369E+01

UPPER LAYER SPECIES CONCENTRATION

	3.33	6.54	3.57	0.000E+00	1.43	0.801	0.492	0.492	0.627
CO2 MASS	1.853E+05	3.281E+05	7.388E+04	0.000E+00	2.255E+04	8.923E+03	1.280E+04	1.280E+04	1.084E+04
CO MASS	6.252E-02	0.123	6.699E-02	0.000E+00	2.684E-02	1.502E-02	9.232E-03	9.232E-03	1.175E-02
PPM	5.461E+03	9.666E+03	2.177E+03	0.000E+00	665.	263.	377.	377.	320.
OD MASS	4.168E-02	8.181E-02	4.466E-02	0.000E+00	1.789E-02	1.001E-02	6.155E-03	6.155E-03	7.834E-03
1/M	5.23	4.46	3.55	0.000E+00	1.53	0.674	0.938	0.938	0.806

**TIME = 600.0 SECONDS.**

U. TEMP.	873.0	2001.1	533.0	300.5	390.5	350.4	362.7	362.7	356.9
L. TEMP.	456.0	1849.0	326.7	303.1	308.2	313.6	307.1	307.1	310.1
U. VOLUME	34.1	64.4	54.8	0.0	43.7	54.8	23.0	23.0	34.5
U. DEPTH	2.3	2.4	2.3	0.0	4.9	2.4	2.4	2.4	2.4
CE. TEMP	552.3	1848.8	377.2	300.4	321.9	311.2	314.0	314.0	312.0
UW. TEMP	552.3	1848.8	377.2	300.4	321.9	311.2	314.0	314.0	312.7
LW. TEMP	429.2	1204.6	324.4	301.0	305.6	303.4	304.1	304.1	303.7
FL. TEMP	523.3	1856.4	342.0	301.5	309.6	305.7	307.0	307.0	306.2
EMS(I)=	0.000E+00	2.580E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.802E+02	-2.516E+03	-3.250E+01	1.841E-03	-8.116E+00	-3.044E+00	-2.129E+00	-2.129E+00	-2.562E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.0041E+02	-3.218E+01	-7.792E+01	-3.457E-04	-4.202E+01	-1.593E+01	-1.130E+01	-1.130E+01	-1.353E+01
	7.361E+00	4.330E-02	2.109E+00	-8.192E-02	3.228E-02	-7.538E-02	-1.357E-04	-1.357E-04	-1.343E-02
Pres(kpo)	1.261E+01	9.549E+00	1.526E+01	1.239E+01	1.767E+01	2.505E+01	2.527E+01	2.527E+01	2.517E+01

UPPER LAYER SPECIES CONCENTRATION

	4.33	7.18	5.53	0.000E+00	2.43	1.63	0.934	0.934	1.23
CO2 MASS	1.884E+05	3.792E+05	9.142E+04	0.000E+00	3.699E+04	1.773E+04	2.499E+04	2.499E+04	2.157E+04
CO MASS	8.110E-02	0.135	0.104	0.000E+00	4.565E-02	3.062E-02	1.750E-02	1.750E-02	2.299E-02
PPM	5.552E+03	1.117E+04	2.694E+03	0.000E+00	1.090E+03	523.	736.	736.	636.
OD MASS	5.407E-02	8.971E-02	6.913E-02	0.000E+00	3.043E-02	2.041E-02	1.167E-02	1.167E-02	1.533E-02
1/M	5.55	4.88	4.41	0.000E+00	2.44	1.30	1.77	1.77	1.56



TIME = 700.0 SECONDS.

U. TEMP.	1046.9	2710.4	602.6	314.2	417.4	366.6	380.9	380.9	374.5
L. TEMP.	650.5	2603.6	364.2	308.7	314.7	316.6	309.8	309.8	309.6
U. VOLUM	36.0	64.4	56.8	1.6	44.0	55.5	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	0.5	4.9	2.4	2.4	2.4	2.4
CE. TEMP	661.0	2609.9	399.0	301.1	329.5	315.6	319.3	319.3	316.7
UW. TEMP	661.0	2609.9	399.0	301.1	329.5	315.6	319.3	319.3	317.7
LW. TEMP	516.3	1655.8	339.6	301.1	308.8	304.7	305.8	305.8	305.1
FL. TEMP	671.0	2614.8	367.9	301.8	315.0	307.9	309.8	309.8	308.6
EMS(I)=	0.000E+00	3.459E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.193E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-3.797E+02	-4.383E+03	-5.760E+01	-8.725E-02	-1.208E+01	-4.387E+00	-2.994E+00	-2.994E+00	-3.648E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.213E+02	-1.487E+01	-1.053E+02	-4.331E-01	-5.651E+01	-2.224E+01	-1.504E+01	-1.504E+01	-1.840E+01
	1.031E+00	1.007E-01	2.683E-01	-3.431E-01	2.174E-03	-6.638E-02	-5.008E-05	-5.008E-05	-2.181E-03
Pres(kpa)	2.087E+01	1.883E+01	2.340E+01	2.108E+01	2.632E+01	3.520E+01	3.544E+01	3.544E+01	3.568E+01

UPPER LAYER SPECIES CONCENTRATION

	5.77	7.97	7.65	3.67	2.77	1.50	1.50	2.03
CO2 MASS	2.852E+05	5.699E+05	1.380E+05	5.917E+04	3.118E+04	4.229E+04	4.229E+04	3.737E+04
CO MASS	0.108	0.149	0.144	6.881E-02	5.201E-02	2.821E-02	2.821E-02	3.802E-02
PPM	8.402E+03	1.679E+04	4.066E+03	1.743E+03	919.	1.246E+03	1.246E+03	1.101E+03
OD MASS	7.207E-02	9.958E-02	9.567E-02	4.588E-02	3.467E-02	1.881E-02	1.881E-02	2.535E-02
1/M	7.01	5.41	5.89	3.65	2.19	2.86	2.86	2.57

TIME = 800.0 SECONDS.

U. TEMP.	990.8	2490.7	586.1	324.4	415.9	371.2	385.0	385.0	378.8
L. TEMP.	708.6	2439.1	383.2	306.0	318.8	310.2	312.6	312.6	310.9
U. VOLUM	36.3	64.4	57.0	5.4	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	1.8	4.9	2.4	2.4	2.4	2.4
CE. TEMP	700.0	2438.1	409.8	303.4	334.3	319.2	323.5	323.5	320.4
UW. TEMP	700.0	2438.1	409.8	303.4	334.3	319.2	323.5	323.5	321.7
LW. TEMP	543.2	1590.1	349.6	301.3	311.4	306.0	307.4	307.4	306.5
FL. TEMP	709.8	2440.2	383.8	302.0	319.2	310.0	312.5	312.5	310.9
EMS(I)=	0.000E+00	1.748E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-2.724E+02	-1.808E+03	-4.872E+01	-3.012E-01	-1.138E+01	-4.660E+00	-3.103E+00	-3.103E+00	-3.832E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-8.538E+01	-6.535E+00	-8.808E+01	-1.677E+00	-5.126E+01	-2.262E+01	-1.487E+01	-1.487E+01	-1.843E+01
QC(I)=	-1.144E-03	-1.458E-01	1.810E-02	-5.941E-02	6.182E-03	-1.091E-03	-1.003E-04	-1.003E-04	8.946E-05
Pres(kpa)	1.797E+01	1.564E+01	2.072E+01	1.929E+01	2.366E+01	3.306E+01	3.236E+01	3.236E+01	3.275E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	5.74	7.11	8.63	0.165	4.63	4.01	2.09	2.86
PPM		2.667E+05	4.674E+05	1.508E+05	1.666E+04	7.433E+04	4.555E+04	5.929E+04	5.335E+04
CO	MASS	0.108	0.133	0.162	3.085E-03	8.689E-02	7.528E-02	3.914E-02	5.367E-02
PPM		7.857E+03	1.377E+04	4.443E+03	491.	2.190E+03	1.342E+03	1.747E+03	1.572E+03
OD	MASS	7.174E-02	8.892E-02	0.108	2.057E-03	5.792E-02	5.018E-02	2.609E-02	3.578E-02
1/M		6.93	4.83	6.62	1.32	4.60	3.16	3.96	3.62



TIME = 900.0 SECONDS.

U. TEMP.	904.9	2064.5	558.9	323.4	407.7	367.9	380.9	380.9	375.2
L. TEMP.	682.6	2070.7	386.1	302.4	320.8	310.8	314.6	314.6	312.3
U. VOLUM	36.3	64.5	57.0	6.5	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.2	4.9	2.4	2.4	2.4	2.4
CE. TEMP	675.1	2023.0	409.2	304.5	335.7	320.8	325.2	325.2	322.0
UW. TEMP	675.1	2023.0	409.2	304.5	335.7	320.8	325.2	325.2	323.5
LW. TEMP	531.7	1388.2	352.2	301.3	312.8	306.8	308.5	308.5	307.5
FL. TEMP	679.2	2023.8	386.4	302.1	321.2	311.2	314.1	314.1	312.3
EMS(I)=	0.000E+00	9.400E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.746E+02	-8.176E+02	-3.783E+01	-3.080E-01	-9.787E+00	-4.215E+00	-2.784E+00	-2.784E+00	-3.467E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-6.590E+01	-5.431E+00	-7.269E+01	-1.657E+01	-4.391E+01	-1.994E+01	-1.306E+01	-1.306E+01	-1.626E+01
	-1.829E-02	-2.814E-01	8.266E-03	-3.393E-03	5.115E-03	1.700E-02	-4.842E-06	-4.842E-06	3.003E-04
Pres(kpa)	1.300E+01	1.042E+01	1.589E+01	1.472E+01	1.872E+01	2.763E+01	2.684E+01	2.684E+01	2.723E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	5.30	6.76	8.29	0.231	4.74	4.34	2.21	2.21	3.07
PPM	2.250E+05	3.680E+05	1.381E+05	1.969E+04	7.450E+04	4.876E+04	6.223E+04	6.223E+04	5.660E+04
CO MASS	9.945E-02	0.127	0.155	4.337E-03	8.885E-02	8.134E-02	4.152E-02	4.152E-02	5.751E-02
PPM	6.628E+03	1.084E+04	4.069E+03	580.	2.195E+03	1.437E+03	1.834E+03	1.834E+03	1.668E+03
OD MASS	6.630E-02	8.448E-02	0.104	2.891E-03	5.923E-02	5.422E-02	2.768E-02	2.768E-02	3.834E-02
1/M	6.40	4.59	6.36	1.57	4.70	3.41	4.20	4.20	3.88

TIME = 1000.0 SECONDS.

U. TEMP.	834.6	1717.5	536.3	321.6	400.5	364.3	376.4	376.4	371.1
L. TEMP.	646.5	1735.4	384.3	300.0	321.8	311.7	316.6	316.6	313.0
U. VOLUM	36.3	64.5	57.1	7.1	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	642.0	1688.1	405.5	305.0	335.8	321.3	325.8	325.8	322.4
UW. TEMP	642.0	1688.1	405.5	305.0	335.8	321.3	325.8	325.8	324.1
LW. TEMP	516.6	1228.4	352.4	301.4	313.5	307.4	309.2	309.2	308.1
FL. TEMP	641.5	1687.3	384.4	302.2	322.0	311.9	314.9	314.9	313.1
EMS(I)=	0.000E+00	5.115E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.193E+02	-3.377E+02	-3.037E+01	-2.909E-01	-8.530E+00	-3.805E+00	-2.497E+00	-2.497E+00	-3.128E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.484E+01	-3.872E+00	-6.214E+01	-1.515E+00	-3.839E+01	-1.773E+01	-1.158E+01	-1.158E+01	-1.445E+01
	-1.693E-02	-2.698E-01	1.360E-03	2.232E-02	2.910E-03	1.113E-02	2.488E-03	2.488E-03	1.678E-04
Pres(kpa)	8.604E+00	5.964E+00	1.150E+01	1.043E+01	1.426E+01	2.257E+01	2.181E+01	2.181E+01	2.219E+01

UPPER LAYER SPECIES CONCENTRATION

	4.97	6.60	7.91	0.277	4.72	4.49	2.26	2.26	2.26	3.16
CO2 MASS	1.946E+05	2.989E+05	1.264E+05	2.127E+04	7.289E+04	4.998E+04	6.281E+04	6.281E+04	6.281E+04	5.762E+04
CO MASS	9.328E-02	0.124	0.148	5.198E-03	8.852E-02	8.422E-02	4.240E-02	4.240E-02	4.240E-02	5.918E-02
OD MASS	5.733E+03	8.808E+03	3.724E+03	627	2.148E+03	1.473E+03	1.851E+03	1.851E+03	1.851E+03	1.698E+03
1/M	6.219E-02	8.250E-02	9.888E-02	3.465E-03	5.901E-02	5.615E-02	2.826E-02	2.826E-02	2.826E-02	3.945E-02
	6.00	4.48	6.07	1.70	4.68	3.53	4.29	4.29	4.29	4.00

TIME = 1100.0 SECONDS.

U. TEMP.	779.6	1443.7	518.8	320.7	394.9	361.1	372.4	372.4	367.5
L. TEMP.	605.9	1427.4	380.1	302.6	321.9	312.1	316.5	316.5	313.3
U. VOLUM	36.3	64.5	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	606.3	1409.9	400.3	305.2	335.1	321.2	325.6	325.6	322.2
UW. TEMP	606.3	1409.9	400.3	305.2	335.1	321.2	325.6	325.6	324.0
LW. TEMP	499.5	1089.5	351.2	301.7	313.9	307.7	309.5	309.5	308.4
FL. TEMP	602.0	1407.9	380.0	302.7	322.1	312.2	315.2	315.2	313.3
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-8.904E+01	-2.325E+02	-2.559E+01	-2.729E-01	-7.685E+00	-3.488E+00	-2.267E+00	-2.267E+00	-2.868E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-4.992E+01	-5.341E+00	-5.563E+01	-1.398E+00	-3.485E+01	-1.612E+01	-1.047E+01	-1.047E+01	-1.314E+01
	-1.117E-02	-8.367E-02	-9.570E-04	2.742E-04	1.124E-03	4.781E-03	2.067E-03	2.067E-03	6.437E-05
Pres(kpa)	5.146E+00	2.710E+00	7.845E+00	6.407E+00	1.039E+01	1.823E+01	1.752E+01	1.752E+01	1.789E+01

UPPER LAYER SPECIES CONCENTRATION

	4.72	6.47	7.58	0.306	4.70	4.62	2.29	2.29	3.22
CO2 MASS	1.723E+05	2.463E+05	1.172E+05	2.315E+04	7.158E+04	5.090E+04	6.300E+04	6.300E+04	5.824E+04
CO MASS	8.841E-02	0.121	0.142	5.732E-03	8.815E-02	8.653E-02	4.299E-02	4.299E-02	6.040E-02
PPM	5.076E+03	7.258E+03	3.453E+03	682.	2.109E+03	1.500E+03	1.856E+03	1.856E+03	1.716E+03
OD	5.894E-02	8.091E-02	9.479E-02	3.821E-03	5.877E-02	5.769E-02	2.866E-02	2.866E-02	4.026E-02
1/M	5.69	4.39	5.81	1.86	4.66	3.63	4.35	4.35	4.08



TIME = 1200.0 SECONDS.

U. TEMP.	738.8	1263.9	506.8	321.0	391.2	359.0	369.5	369.5	365.1
L. TEMP.	570.9	1225.9	375.7	302.8	321.7	312.2	316.0	316.0	313.3
U. VOLUM	36.3	64.5	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	575.2	1214.5	395.3	305.4	334.3	321.0	325.2	325.2	321.9
UW. TEMP	575.2	1214.5	395.3	305.4	334.3	321.0	325.2	325.2	323.7
LW. TEMP	483.9	986.4	349.6	301.9	314.0	307.9	309.7	309.7	308.5
FL. TEMP	568.1	1212.0	375.4	302.9	321.8	312.3	315.2	315.2	313.3
EMS(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-7.179E+01	-2.226E+02	-2.278E+01	-2.754E-01	-7.184E+00	-3.289E+00	-2.118E+00	-2.118E+00	-2.705E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.795E+01	-9.777E+00	-5.207E+01	-1.409E+00	-3.283E+01	-1.515E+01	-9.776E+00	-9.776E+00	-1.235E+01
	-6.852E-03	-5.711E-02	-1.076E-03	1.419E-04	4.403E-04	2.331E-03	-1.721E-04	-1.721E-04	2.574E-05
Pres(kpa)	2.589E+00	3.193E-01	5.130E+00	3.589E+00	7.547E+00	1.510E+01	1.441E+01	1.441E+01	1.478E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	4.54	6.46	7.34	0.332	4.71	4.74	2.33	2.33	3.29
PPM		1.571E+05	2.151E+05	1.109E+05	2.520E+04	7.101E+04	5.200E+04	6.342E+04	6.342E+04	5.904E+04
CO	MASS	8.511E-02	0.121	0.138	6.233E-03	8.826E-02	8.895E-02	4.361E-02	4.361E-02	6.163E-02
PPM		4.630E+03	6.337E+03	3.267E+03	742.	2.092E+03	1.532E+03	1.869E+03	1.869E+03	1.740E+03
OD	MASS	5.674E-02	8.069E-02	9.179E-02	4.155E-03	5.884E-02	5.930E-02	2.908E-02	2.908E-02	4.109E-02
1/M		5.47	4.38	5.63	2.02	4.67	3.73	4.42	4.42	4.16

TIME = 1300.0 SECONDS.

U. TEMP.	707.1	1125.9	498.4	321.9	389.1	357.6	367.6	367.6	363.6
L. TEMP.	540.9	1094.2	371.3	303.1	321.3	312.1	315.5	315.5	313.1
U. VOLUM	36.3	64.4	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	548.3	1060.6	390.7	305.7	333.6	320.7	324.7	324.7	321.4
UW. TEMP	548.3	1060.6	390.7	305.7	333.6	320.7	324.7	324.7	323.4
LW. TEMP	469.4	897.8	347.9	302.0	314.0	308.0	309.8	309.8	308.6
FL. TEMP	539.0	1057.5	371.0	303.1	321.4	312.2	315.0	315.0	313.1
EMS(I)=	0.000E+00	3.778E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-6.095E+01	-2.020E+02	-2.106E+01	-2.888E-01	-6.920E+00	-3.180E+00	-2.030E+00	-2.030E+00	-2.612E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.755E+01	-1.545E+01	-5.020E+01	-1.487E+00	-3.186E+01	-1.465E+01	-9.392E+00	-9.392E+00	-1.193E+01
	-4.198E-03	-2.356E-01	-8.780E-04	6.834E-05	1.265E-04	9.163E-04	2.376E-04	2.376E-04	1.193E-05
Pres(kpa)	9.378E-01	-1.106E+00	3.292E+00	1.629E+00	5.567E+00	1.294E+01	1.230E+01	1.230E+01	1.265E+01

UPPER LAYER SPECIES CONCENTRATION

	4.45	6.53	7.19	0.359	4.74	4.88	2.36	2.36	3.36
CO2 MASS	1.473E+05	1.940E+05	1.068E+05	2.727E+04	7.103E+04	5.331E+04	6.412E+04	6.412E+04	6.006E+04
CO MASS	8.335E-02	0.122	0.135	6.726E-03	8.879E-02	9.153E-02	4.432E-02	4.432E-02	6.297E-02
OD MASS	4.339E+03	5.716E+03	3.146E+03	804.	2.093E+03	1.571E+03	1.889E+03	1.889E+03	1.770E+03
1/M	5.557E-02	8.162E-02	8.988E-02	4.484E-03	5.919E-02	6.102E-02	2.955E-02	2.955E-02	4.198E-02
	5.36	4.43	5.51	2.18	4.70	3.84	4.49	4.49	4.25



TIME = 1400.0 SECONDS.

U. TEMP.	676.4	1008.8	490.9	323.2	387.3	356.8	366.5	366.5	362.5
L. TEMP.	514.8	1001.7	367.3	303.3	320.9	312.0	315.3	315.3	312.9
U. VOLUM	36.3	64.2	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	524.6	933.3	386.7	306.0	332.9	320.4	324.3	324.3	321.0
UW. TEMP	524.6	933.3	386.7	306.0	332.9	320.4	324.3	324.3	323.1
LW. TEMP	455.6	818.1	346.2	302.2	314.0	308.0	309.8	309.8	308.6
FL. TEMP	513.4	929.3	367.1	303.3	321.0	312.1	314.7	314.7	312.9
EMS(I)=	0.000E+00	5.607E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.116E+01	-1.638E+02	-1.960E+01	-3.072E-01	-6.723E+00	-3.120E+00	-1.984E+00	-1.984E+00	-2.556E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.623E+01	-2.029E+01	-4.850E+01	-1.595E+00	-3.116E+01	-1.440E+01	-9.212E+00	-9.212E+00	-1.168E+01
	-2.778E-03	-6.589E-01	-5.635E-04	4.057E-05	4.252E-05	5.432E-05	7.010E-05	7.010E-05	5.895E-06
Pres(kpa)	-2.454E-01	-2.114E+00	1.963E+00	3.159E-01	4.154E+00	1.140E+00	1.078E+01	1.078E+01	1.113E+01

UPPER LAYER SPECIES CONCENTRATION

	4.40	6.58	7.10	0.385	4.78	5.02	2.40	2.40	3.43
CO2 MASS	1.396E+05	1.756E+05	1.038E+05	2.935E+04	7.132E+04	5.472E+04	6.497E+04	6.497E+04	6.119E+04
CO MASS	8.257E-02	0.123	0.133	7.212E-03	8.955E-02	9.415E-02	4.504E-02	4.504E-02	6.433E-02
PPM	4.112E+03	5.175E+03	3.059E+03	865.	2.102E+03	1.612E+03	1.914E+03	1.914E+03	1.803E+03
OD MASS	5.505E-02	8.223E-02	8.876E-02	4.808E-03	5.970E-02	6.277E-02	3.003E-02	3.003E-02	4.289E-02
1/M	5.31	4.48	5.44	2.34	4.74	3.95	4.56	4.56	4.34

U. TEMP.	641.1	900.2	480.5	323.9	384.5	355.7	365.1	365.1	361.1
L. TEMP.	489.8	927.8	363.3	303.5	320.4	311.9	315.3	315.3	312.7
U. VOLUM	36.3	63.9	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	501.6	823.8	382.4	306.3	332.0	320.1	323.9	323.9	320.6
UW. TEMP	501.6	823.8	382.4	306.3	332.0	320.1	323.9	323.9	322.7
LW. TEMP	441.3	744.8	344.2	302.3	313.8	308.0	309.8	309.8	308.6
FL. TEMP	488.7	818.3	363.1	303.5	320.4	311.9	314.5	314.5	312.7
EMS(I)=	0.000E+00	5.131E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.054E+01	-1.162E+02	-1.758E+01	-3.154E-01	-6.378E+00	-3.026E+00	-1.923E+00	-1.923E+00	-2.474E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.279E+01	-2.232E+01	-4.542E+01	-1.639E+00	-2.978E+01	-1.397E+01	-8.953E+00	-8.953E+00	-1.131E+01
	-1.939E-03	-1.290E+00	-3.815E-04	3.055E-05	2.977E-05	4.515E-04	9.013E-04	9.013E-04	5.309E-06
Pres(kpa)	-1.593E+00	-3.333E+00	4.857E-01	-1.025E+00	2.597E+00	9.637E+00	9.029E+00	9.029E+00	9.374E+00

[illegible]

INPUT FAST FILE : SYS:TWOA.DMP/G  
INPUT EXITT FILE : SCENSEV.EVA  
TENABS OUTPUT FILE: SCENSEV.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	156
	5	160
	3	161
	10	162

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	6	0
	5	156
	5	160
	3	161
	10	162

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	9	0
	5	161
	5	165
	3	169
	10	170

OCCUPANT 4	ROOM NUMBER	ENTER TIME (S)
	8	0
	5	150
	9	153
	5	159
	5	163
	3	164
	10	165

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 2							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 3

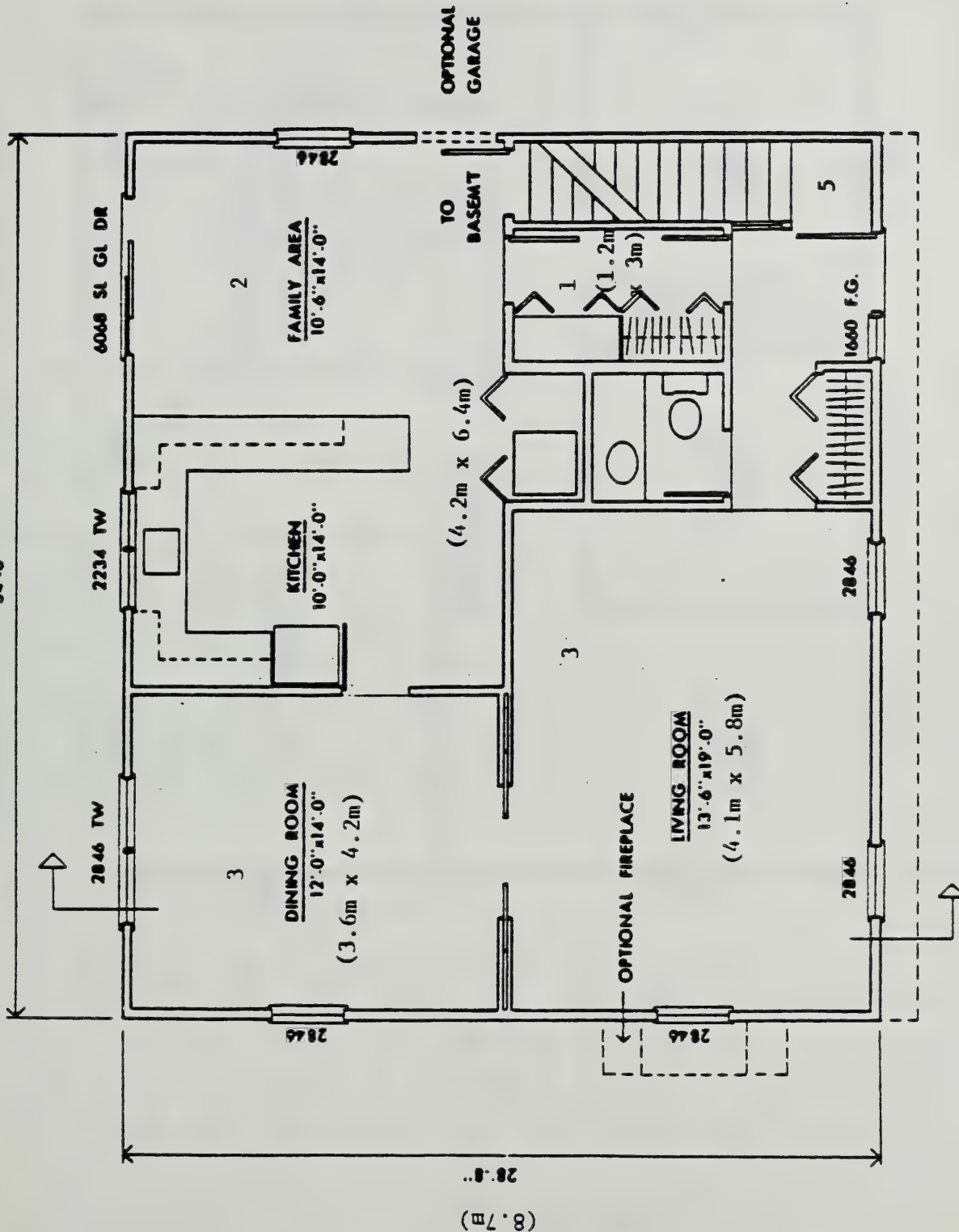
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 4

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.



(10.4m)  
34'-0"



# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

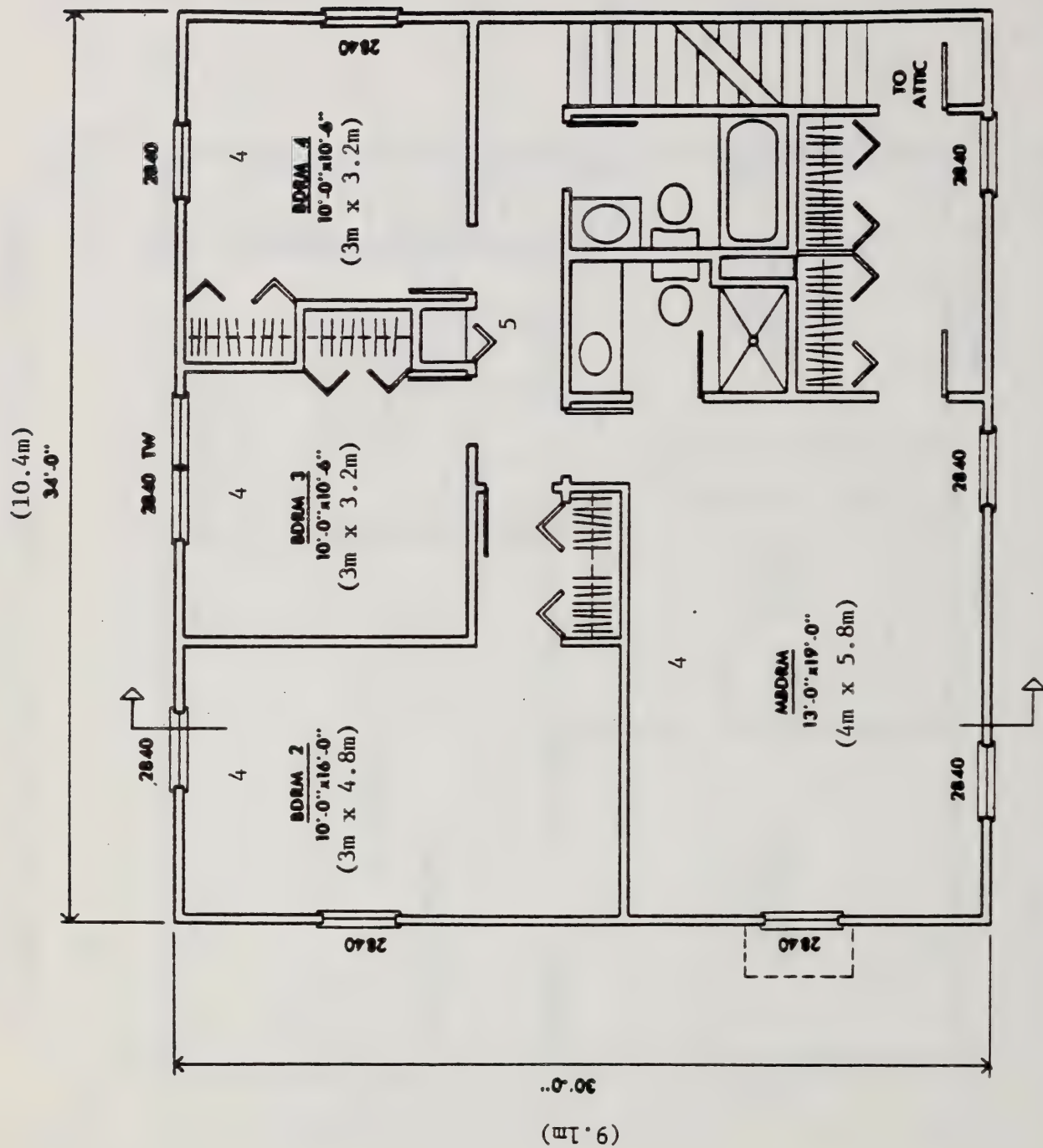


AUG. 10, 1977

2005

G.1 - Floor Plan for FIRE #7  
(5 Compartments)

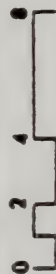




G.2 - Floor Plan for FIRE #7  
(5 Compartments)

# UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG. 10, 1977



1485

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VERSN 017 TWO STORY HOUSE -PASSAGE
TIMES 1500 100 0 0 0 0
NROOM 5
NMXOP 1
TAMB 300
HI/F 0.0 0.0 0.0 2.7 0.0
WIDTH 1.0 6.4 5.8 6.0 1.0
DEPTH 3.0 4.2 6.7 9.5 9.0
HEIGH 2.4 2.4 2.4 2.4 4.9
HVENT 1 2 1.1 .02 0.0
HVENT 1 3 1.1 .02 0.0
HVENT 2 3 1.1 2.1 0.0
HVENT 3 5 1.1 2.1 0.
HVENT 4 5 .04 2.1 0.0
HVENT 2 6 1.1 .02 0.0
CEILI
COND .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790
THICK .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9
WALLS
COND .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790
THICK .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9
FLOOR
COND .0001 .0001 .0001 .0001 .0001
SPHT 1.4 1.4 1.4 1.4 1.4
DNSTY 300 300 300 300 300
THICK .0127 .0127 .0127 .0127 .0127
EMISS 1.0 1.0 1.0 1.0 1.0
LFBO 2
LFBT 1
LFPOS 1
CHEMI 1.0 0.0 0.0 0.0 0.0 18100 300
LFMAX 13
FTIME 100 50 65 75 110 30 50 120 40 40 150 180 490
FMASS 0.0 .004 .008 .032 .162 .153 .224 .245 .199 .376 .376 .122 .041 0.0
FHIGH 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
CO .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03
O2 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4
CO2 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6
OD .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02
CT 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.

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H - INPUT FOR FAST (5 COMPARTMENTS)



**I. OUTPUT COMPUTER FILES FOR FIRE #7**

## TWO STORY HOUSE -PASSAGE

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	1.0	6.4	5.8	6.0	1.0
DEPTH	3.0	4.2	6.7	9.5	9.0
HEIGHT	2.4	2.4	2.4	2.4	4.9
AREA	3.0	26.9	38.9	57.0	9.0
VOLUME	7.2	64.5	93.3	136.8	44.1
CEILING	2.4	2.4	2.4	5.1	4.9
FLOOR	0.0	0.0	0.0	2.7	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00
	HH=	0.00	0.02	0.02	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.02	0.02	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	1.10	0.00	0.00	1.10
	HH=	0.02	0.00	2.10	0.00	0.00	0.02
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	0.00	2.10	0.00	0.00	0.02
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	1.10	0.00	0.00	1.10	0.00
	HH=	0.02	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.04	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00
5 ( 1 )	BW=	0.00	0.00	1.10	0.04	0.00	0.00
	HH=	0.00	0.00	2.10	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

## FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02



	FMASS=	0.00E+00	4.00E-03	8.00E-03	3.20E-02	0.16	0.15	0.22	0.24	0.20	0.38	0.38	0.12	4.1
0E-02	0.00E+00													
FHIGH=	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
0E+00	0.00E+00													
O2=	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.
4	-1.4													
CO2=	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.
6	1.6													
CO=	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.0
0E-02	3.00E-02													
OD=	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.00E-02	2.0
0E-02	2.00E-02													
CT=	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.
0	1.0													
FTIME=	1.00E+02	50.	65.	75.	1.10E+02	30.	50.	1.20E+02	40.	40.	1.50E+02	1.80E+02	4.9	0E+02

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U.TEMP	300.0	356.6	316.1	300.2	300.7
L.TEMP	300.0	300.0	300.0	300.0	300.0
UL.VOLUM	0.0	33.7	36.8	1.0	19.3
UL.THICK	0.0	1.3	0.9	0.0	2.1
CE.TEMP	300.0	306.6	301.1	300.0	300.0
UW.TEMP	300.0	304.4	300.7	300.0	300.0
LW.TEMP	300.0	300.6	300.1	300.0	300.0
FL.TEMP	300.0	301.0	300.2	300.0	300.0
PLUME	0.000E+00	4.528E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.822E-08	2.422E-02	6.491E-03	8.267E-05	4.246E-04
	-2.773E-09	4.130E-02	8.314E-03	5.250E-05	8.060E-05
QSCW	4.690E-10	4.242E-01	9.136E-02	2.306E-04	1.671E-03
	3.639E-08	-2.190E-03	-1.883E-04	-8.787E-06	2.608E-08

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.010E+05	2.048E+05	2.070E+05	2.069E+05
CO2	PPM	0.000E+00	4.368E+03	1.592E+03	46.1	84.4
CO	PPM	0.000E+00	129.	46.9	1.36	2.49
OD	1/M	0.000E+00	0.287	0.118	3.599E-03	6.568E-03
CT	GM/M3	0.000E+00	3.02	0.844	1.208E-02	2.229E-02

TIME = 200.0 SECONDS.

U. TEMP	300.0	523.2	377.8	303.6	327.2
L. TEMP	300.0	301.2	300.3	300.0	300.0
UL. VOLUM	0.0	51.6	77.2	71.5	42.0
UL. THICK	0.0	1.9	2.0	1.3	4.7
CE. TEMP	300.0	339.2	310.5	300.1	302.3
UW. TEMP	300.0	327.4	307.1	300.1	301.5
LW. TEMP	300.0	305.8	301.3	300.0	300.2
FL. TEMP	300.0	309.6	302.2	300.0	300.4
PLUME	0.000E+00	8.619E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	4.536E-07	2.550E-01	3.956E-02	1.699E-03	1.637E-02
	-5.493E-08	4.338E-01	9.451E-02	1.782E-03	2.023E-02
QSCW	9.329E-09	1.928E+00	6.107E-01	1.301E-02	1.760E-01
	8.146E-07	-4.068E-02	-5.720E-03	-2.077E-05	-5.291E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.816E+05	1.954E+05	2.063E+05	2.020E+05
CO2	PPM	0.000E+00	1.835E+04	8.362E+03	537.	3.631E+03
CO	PPM	0.000E+00	541.	246.	15.8	107.
OD	1/M	0.000E+00	0.821	0.518	4.141E-02	0.260
CT	GM/M3	0.000E+00	15.5	7.57	0.240	2.12

THE FIRE BECAME VENTILATION CONTROLLED AT 280. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 300.0 SECONDS.

U. TEMP	338.3	1372.3	655.3	325.3	470.3
L. TEMP	308.4	751.6	339.4	301.0	310.4
UL. VOLUM	7.2	64.5	93.3	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	303.8	761.4	376.6	303.4	331.0
UW. TEMP	302.5	710.7	355.8	302.3	321.8
LW. TEMP	300.7	605.8	323.7	300.6	306.2
FL. TEMP	300.9	807.3	339.9	301.0	310.5
PLUME	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	2.917E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	2.325E-02	1.880E+01	7.557E-01	9.100E-03	1.933E-01
	4.545E-02	1.513E+01	1.381E+00	3.111E-02	3.789E-01
QSCW	2.667E-01	5.009E+00	2.911E+00	1.480E-01	1.414E+00
	3.782E-04	4.915E-05	-5.876E-06	-1.150E-06	8.688E-07

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.981E+05	0.000E+00	1.150E+05	2.054E+05	1.566E+05
CO2	PPM	/	9.330E+03	2.165E+05	8.429E+04	5.454E+03	4.621E+04
CO	PPM	/	275.	6.379E+03	2.484E+03	161.	1.362E+03
OD	1/M	/	0.646	3.69	3.01	0.393	2.30
CT	GM/M3	/	3.79	61.1	40.0	5.38	24.8



TIME = 400.0 SECONDS.

U. TEMP	362.5	1488.7	707.4	324.0	504.2
L. TEMP	337.3	1126.3	401.0	302.0	328.2
UL. VOLUM	7.2	64.5	93.2	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	312.5	1132.7	432.0	305.1	358.1
UW. TEMP	308.7	1085.3	401.1	303.5	342.6
LW. TEMP	303.5	831.9	359.8	301.2	317.0
FL. TEMP	304.4	1155.6	397.6	302.0	328.4
PLUME	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	3.625E-02	1.998E+01	9.717E-01	5.256E-03	2.466E-01
QSCW	1.006E-01	1.282E+01	1.868E+00	3.362E-02	5.674E-01
	4.182E-01	2.194E+00	2.689E+00	1.215E-01	1.431E+00
	1.425E-02	-2.702E-02	7.358E-04	-7.275E-07	-1.713E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.624E+05	0.000E+00	5.105E+04	2.103E+05	7.676E+04
CO2 PPM	5.340E+04	3.505E+05	2.191E+05	1.167E+04	1.657E+05
CO PPM	1.573E+03	1.033E+04	6.456E+03	344.	4.882E+03
OD 1/M	3.45	5.51	7.25	0.843	7.69
CT GM/M3	48.8	175.	165.	19.6	143.

TIME = 500.0 SECONDS.

U. TEMP.	327.4	1751.1	712.5	347.7	503.9
L. TEMP.	307.9	1479.2	412.6	326.4	333.6
U. VOLUM	5.4	64.5	93.2	30.6	44.1
U. DEPTH	1.8	2.4	2.4	0.5	4.9
CE. TEMP	303.8	1473.3	436.7	312.5	353.8
UW. TEMP	303.8	1473.3	436.7	312.5	353.8
LW. TEMP	301.0	986.6	365.7	303.9	318.9
FL. TEMP	301.7	1489.7	414.0	306.8	332.8
EMS(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.438E-01	-2.712E+03	-1.722E+02	-3.954E+00	-3.181E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.945E+00	-8.006E+01	-2.032E+02	-1.798E+01	-1.035E+02
	-9.985E-02	4.068E-01	1.125E-01	-5.866E+00	-1.895E-05
Pres(kpa)	2.107E+01	2.000E+01	2.296E+01	4.051E+01	2.501E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	7.078E-02	5.52	7.86	0.999	3.28
	PPM	7.263E+03	2.550E+05	1.021E+05	1.931E+04	6.377E+04
CO	MASS	1.327E-03	0.104	0.147	1.874E-02	6.154E-02
	PPM	214.	7.515E+03	3.009E+03	569.	1.879E+03
OD	MASS	8.848E-04	6.904E-02	9.827E-02	1.249E-02	4.103E-02
	1/M	0.571	3.75	3.69	1.43	3.26

TIME = 600.0 SECONDS.

U. TEMP.	331.9	1850.8	749.7	352.5	523.9
L. TEMP.	308.1	1680.0	454.3	327.7	347.5
U. VOLUM	6.1	64.5	93.3	32.1	44.1
U. DEPTH	2.0	2.4	2.4	0.6	4.9
CE. TEMP	305.8	1677.3	471.0	314.8	366.9
UW. TEMP	305.8	1677.3	471.0	314.8	366.9
LW. TEMP	301.5	1113.6	390.4	304.8	326.0
FL. TEMP	302.5	1686.1	455.0	308.1	344.6
EMS(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-4.278E-01	-2.208E+03	-2.071E+02	-4.424E+00	-3.730E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-2.404E+00	-4.057E+01	-1.982E+02	-1.969E+01	-1.069E+02
	-6.002E-02	1.215E-01	4.242E-02	-5.924E+00	3.975E-03
Pres(kpa)	2.198E+01	1.983E+01	2.277E+01	4.318E+01	2.488E+01

UPPER LAYER SPECIES CONCENTRATION

C02 MASS	0.103	5.69	8.68	1.25	3.77
PPM	9.545E+03	2.777E+05	1.187E+05	2.340E+04	7.623E+04
C0 MASS	1.937E-03	0.107	0.163	2.352E-02	7.076E-02
PPM	281.	8.182E+03	3.496E+03	690.	2.246E+03
OD MASS	1.291E-03	7.111E-02	0.109	1.568E-02	4.717E-02
1/M	0.740	3.86	4.07	1.71	3.74

TIME = 700.0 SECONDS.

U. TEMP.	349.0	2494.8	852.1	360.6	567.5
L. TEMP.	314.3	2375.3	516.7	329.7	361.5
U. VOLUM	6.6	64.5	93.3	34.1	44.1
U. DEPTH	2.2	2.4	2.4	0.6	4.9
CE. TEMP	309.2	2374.2	523.1	317.4	383.1
UW. TEMP	309.2	2374.2	523.1	317.4	383.1
LW. TEMP	302.3	1527.5	427.9	305.7	335.2
FL. TEMP	303.9	2380.1	517.3	309.4	359.7
EMS(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.193E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-7.656E-01	-4.033E+03	-3.495E+02	-5.370E+00	-5.349E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.396E+00	-2.014E+01	-2.268E+02	-2.354E+01	-1.259E+02
	-7.121E-02	7.191E-02	2.524E-02	-6.151E+00	2.650E-03
Pres(kpa)	3.207E+01	3.130E+01	3.393E+01	4.685E+01	3.596E+01

		UPPER LAYER SPECIES CONCENTRATION			
CO2	MASS	0.166	6.14	10.2	1.66
	PPM	1.478E+04	4.035E+05	1.590E+05	2.981E+04
CO	MASS	3.105E-03	0.115	0.192	3.110E-02
	PPM	435.	1.189E+04	4.685E+03	878.
OD	MASS	2.070E-03	7.670E-02	0.128	2.073E-02
	1/M	1.09	4.16	4.80	2.13
					4.63
					4.67
					1.021E+05
					8.754E-02
					3.010E+03
					5.836E-02

TIME = 800.0 SECONDS.

U. TEMP.	344.6	2335.8	863.4	368.3	581.2
L. TEMP.	310.4	2298.3	563.4	331.5	375.6
U. VOLUM	7.1	64.5	93.3	36.0	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	311.2	2271.0	564.1	320.5	397.1
UW. TEMP	311.2	2271.0	564.1	320.5	397.1
LW. TEMP	303.2	1495.6	457.5	306.6	344.4
FL. TEMP	305.3	2273.6	563.9	310.9	374.3
EMS(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-6.660E-01	-1.825E+03	-3.503E+02	-6.306E+00	-5.811E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.659E+00	-9.084E+00	-1.962E+02	-2.685E+01	-1.234E+02
	-1.197E-02	-1.682E-01	1.891E-02	-6.318E+00	-4.215E-04
Pres(kpa)	2.763E+01	2.458E+01	2.750E+01	5.055E+01	2.966E+01

UPPER LAYER SPECIES CONCENTRATION

	0.194	5.96	10.9	2.15	5.12
CO2 MASS	1.612E+04	3.674E+05	1.713E+05	3.729E+04	1.147E+05
PPM	3.641E-03	0.112	0.204	4.024E-02	9.601E-02
CO MASS	475.	1.083E+04	5.049E+03	1.099E+03	3.381E+03
PPM	2.427E-03	7.455E-02	0.136	2.683E-02	6.401E-02
OD MASS	1.20	4.05	5.11	2.60	5.08
1/M					



TIME = 900.0 SECONDS.

U. TEMP.	332.0	1934.3	826.4	365.4	573.0
L. TEMP.	305.5	1905.4	569.9	331.1	384.9
U. VOLUM	7.2	64.5	93.2	36.1	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	310.5	1886.7	571.8	322.0	403.7
UW. TEMP	310.5	1886.7	571.8	322.0	403.7
LW. TEMP	303.4	1306.0	464.8	307.3	349.9
FL. TEMP	305.6	1887.7	570.4	311.9	382.3
EMS(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-4.129E-01	-7.675E+02	-2.774E+02	-5.753E+00	-5.291E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.119E+00	-6.851E+00	-1.617E+02	-2.369E+01	-1.109E+02
	3.625E-04	-6.673E-02	1.575E-02	-5.907E+00	3.363E-03
Pres(kpa)	1.668E+01	1.381E+01	1.664E+01	5.043E+01	1.885E+01

UPPER LAYER SPECIES CONCENTRATION

	0.189	5.58	10.9	2.28	5.27
CO2 MASS	1.483E+04	2.846E+05	1.637E+05	3.919E+04	1.164E+05
PPM	3.547E-03	0.105	0.204	4.271E-02	9.880E-02
CO	437.	8.387E+03	4.824E+03	1.155E+03	3.430E+03
PPM	2.365E-03	6.979E-02	0.136	2.847E-02	6.587E-02
OD	1.15	3.79	5.10	2.76	5.23
1/M					

TIME = 1000.0 SECONDS.

U. TEMP.	324.0	1621.7	787.0	358.3	555.9
L. TEMP.	305.3	1593.5	561.3	328.9	386.9
U. VOLUM	7.2	64.5	93.2	34.8	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	309.3	1585.2	565.1	321.6	404.8
UW. TEMP	309.3	1585.2	565.1	321.6	404.8
LW. TEMP	303.3	1161.2	463.6	307.6	352.3
FL. TEMP	305.3	1584.5	561.3	312.0	384.5
EMS(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.724E-01	-3.512E+02	-2.177E+02	-4.740E+00	-4.475E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.298E+00	-5.426E+00	-1.385E+02	-1.904E+01	-9.683E+01
	9.799E-06	-2.700E-02	-3.480E-03	-5.197E+00	3.176E-03
Pres(kpa)	9.053E+00	6.247E+00	9.002E+00	4.752E+01	1.125E+01

UPPER LAYER SPECIES CONCENTRATION

C02	MASS	0.186	5.47	10.8	2.17	5.32
	PPM	1.425E+04	2.339E+05	1.550E+05	3.797E+04	1.140E+05
CO	MASS	3.491E-03	0.103	0.203	4.069E-02	9.971E-02
	PPM	420.	6.893E+03	4.567E+03	1.119E+03	3.358E+03
OD	MASS	2.328E-03	6.842E-02	0.135	2.713E-02	6.647E-02
	1/M	1.13	3.71	5.07	2.73	5.28

TIME = 1100.0 SECONDS.

U. TEMP.	319.3	1389.0	749.7	351.8	539.4
L. TEMP.	304.8	1348.9	545.5	326.5	384.2
U. VOLUM	7.2	64.5	93.3	33.2	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	308.0	1343.0	550.7	320.4	402.6
UW. TEMP	308.0	1343.0	550.7	320.4	402.6
LW. TEMP	303.1	1040.8	457.7	307.5	352.6
FL. TEMP	304.8	1341.4	544.2	311.6	382.9
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.029E-01	-2.761E+02	-1.736E+02	-3.933E+00	-3.807E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-9.155E-01	-8.298E+00	-1.235E+02	-1.551E+01	-8.627E+01
	7.330E-05	-2.311E-02	-7.398E-03	-4.533E+00	-3.783E-04
Pres(kpa)	3.480E+00	1.169E+00	3.648E+00	4.420E+01	5.847E+00

UPPER LAYER SPECIES CONCENTRATION					
CO2	MASS	0.188	5.52	10.8	5.32
	PPM	1.420E+04	2.022E+05	1.471E+05	3.652E+04
CO	MASS	3.532E-03	0.104	0.202	3.805E-02
	PPM	418.	5.959E+03	4.334E+03	1.076E+03
OD	MASS	2.354E-03	6.905E-02	0.135	2.537E-02
	1/M	1.14	3.75	5.05	2.67
					5.27

TIME = 1200.0 SECONDS.

U. TEMP.	319.3	1237.6	722.1	346.1	528.4
L. TEMP.	304.4	1204.4	527.8	324.2	381.3
U. VOLUM	7.2	64.5	93.3	31.7	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	307.2	1172.5	535.6	318.9	399.6
UW. TEMP	307.2	1172.5	535.6	318.9	399.6
LW. TEMP	302.9	951.1	450.8	307.2	352.1
FL. TEMP	304.4	1170.6	526.8	311.0	380.2
EMS(I)=	0.000E+00	4.029E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.152E-01	-2.684E+02	-1.475E+02	-3.297E+00	-3.422E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.003E+00	-1.438E+01	-1.162E+02	-1.281E+01	-8.059E+01
	3.390E-05	-2.048E-01	-4.820E-03	-3.961E+00	-2.328E-04
Pres(kpa)	7.691E-01	-9.760E-01	1.260E+00	4.098E+01	3.377E+00

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	0.201	5.71	10.8	1.89	5.36
	PPM	1.516E+04	1.863E+05	1.428E+05	3.515E+04	1.092E+05
CO	MASS	3.771E-03	0.107	0.203	3.545E-02	0.101
	PPM	447.	5.488E+03	4.208E+03	1.036E+03	3.219E+03
OD	MASS	2.514E-03	7.132E-02	0.136	2.363E-02	6.704E-02
	1/M	1.22	3.87	5.09	2.61	5.32

TIME = 1300.0 SECONDS.

U. TEMP.	321.4	1115.5	697.5	341.0	520.0
L. TEMP.	304.2	1101.0	510.7	322.1	378.7
U. VOLUM	7.2	64.3	93.3	30.2	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	1035.4	520.6	317.3	396.5
UW. TEMP	306.9	1035.4	520.6	317.3	396.5
LW. TEMP	302.8	872.3	443.5	306.9	351.3
FL. TEMP	304.2	1033.1	510.0	310.1	377.2
EMS(I)=	0.000E+00	6.181E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.576E-01	-2.346E+02	-1.272E+02	-2.788E+00	-3.160E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.265E+00	-2.045E+01	-1.108E+02	-1.069E+01	-7.698E+01
	1.580E-05	-5.668E-01	-2.400E-03	-3.488E+00	2.032E-03
Pres(kpa)	-4.777E-01	-1.941E+00	1.109E-01	3.808E+01	2.137E+00

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	0.219	5.90	11.0	1.77	5.44
PPM	1.663E+04	1.738E+05	1.400E+05	3.394E+04	1.090E+05
CO MASS	4.110E-03	0.111	0.206	3.311E-02	0.102
PPM	490.	5.121E+03	4.124E+03	1000.	3.212E+03
OD MASS	2.740E-03	7.369E-02	0.138	2.207E-02	6.797E-02
1/M	1.33	4.01	5.16	2.56	5.39



TIME = 1400.0 SECONDS.

U. TEMP.	322.9	1006.5	671.4	336.5	511.1
L. TEMP.	304.1	1017.7	493.4	320.2	375.3
U. VOLUM	7.2	64.1	93.3	28.8	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	918.3	505.3	315.6	393.1
UW. TEMP	306.9	918.3	505.3	315.6	393.1
LW. TEMP	302.8	799.3	435.1	306.4	350.1
FL. TEMP	304.1	915.0	493.0	309.2	373.9
EMS(I)=	0.000E+00	7.056E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.867E-01	-1.855E+02	-1.078E+02	-2.376E+00	-2.897E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.445E+00	-2.507E+01	-1.045E+02	-8.996E+00	-7.320E+01
	1.139E-05	-1.091E+00	-1.202E-03	-3.094E+00	-4.746E-04
Pres(kpa)	-1.691E+00	-3.074E+00	-1.173E+00	3.548E+01	7.596E-01

UPPER LAYER SPECIES CONCENTRATION

CO2	0.237	6.03	11.1	1.65	5.50
MASS	1.805E+04	1.609E+05	1.364E+05	3.289E+04	1.084E+05
PPM	4.439E-03	0.113	0.209	3.102E-02	0.103
CO	532.	4.742E+03	4.020E+03	969.	3.194E+03
MASS	2.960E-03	7.537E-02	0.139	2.068E-02	6.877E-02
1/M	1.44	4.11	5.23	2.52	5.46

TIME = 1500.0 SECONDS.

U. TEMP.	323.3	906.1	643.8	332.3	500.8
L. TEMP.	304.0	948.9	475.9	318.4	372.6
U. VOLUM	7.2	63.7	93.3	27.4	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	816.4	489.4	314.0	389.2
UW. TEMP	306.9	816.4	489.4	314.0	389.2
LW. TEMP	302.8	731.5	425.9	306.0	348.4
FL. TEMP	304.1	811.7	475.7	308.4	370.2
EMS(I)=	0.000E+00	6.196E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.951E-01	-1.353E+02	-8.968E+01	-2.023E+00	-2.609E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.496E+00	-2.754E+01	-9.742E+01	-7.545E+00	-6.876E+01
	6.919E-06	-1.864E+00	-6.106E-04	-2.748E+00	3.123E-03
Pres(kpa)	-3.216E+00	-4.524E+00	-2.784E+00	3.306E+01	-9.437E-01

UPPER LAYER SPECIES CONCENTRATION

	0.252	6.12	11.3	1.55	5.54
CO2 MASS	1.925E+04	1.480E+05	1.321E+05	3.194E+04	1.070E+05
CO PPM	4.726E-03	0.115	0.211	2.910E-02	0.104
PPM	567.	4.360E+03	3.891E+03	941.	3.153E+03
OD MASS	3.151E-03	7.649E-02	0.141	1.940E-02	6.928E-02
1/M	1.53	4.20	5.28	2.47	5.50

EXECUTION TIME = 167.81

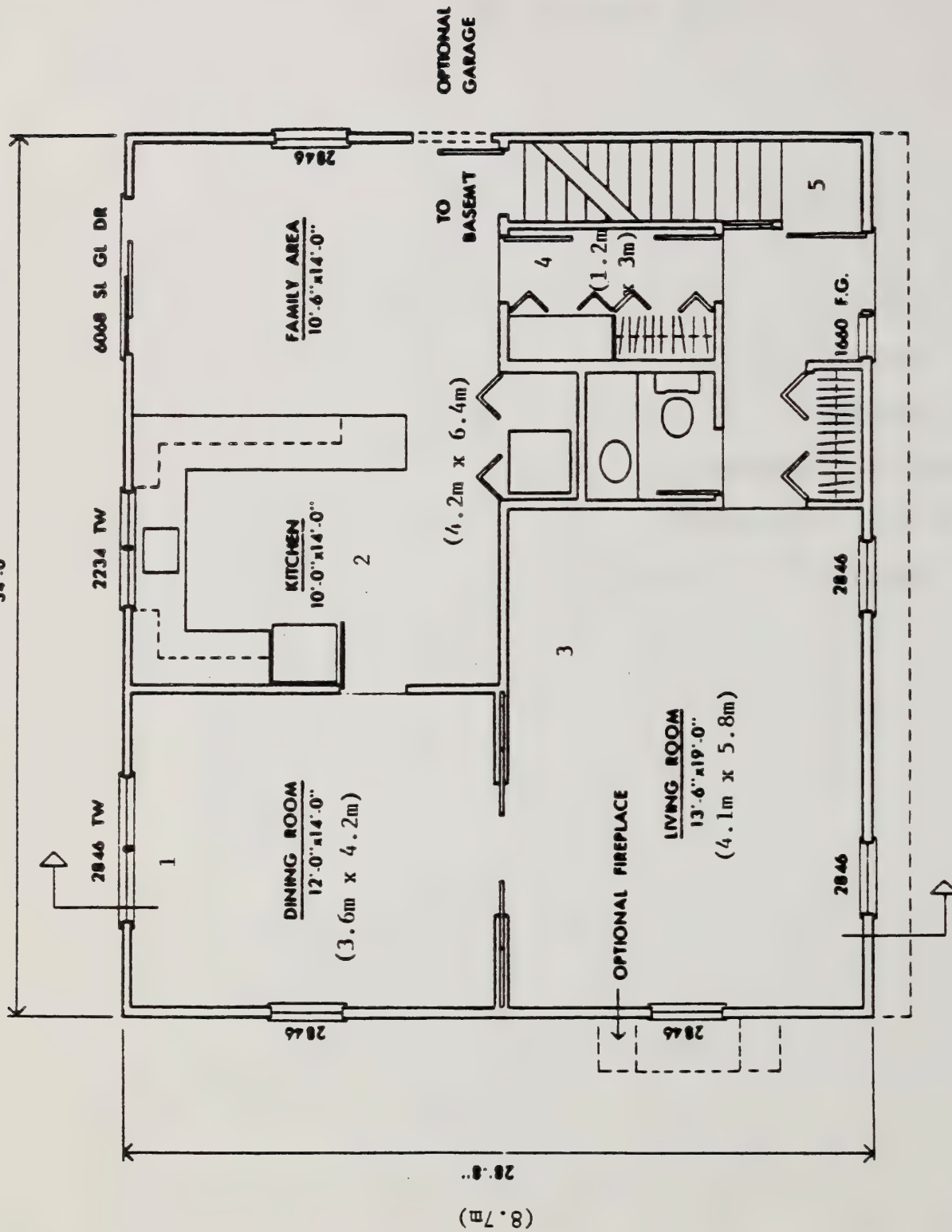


FIRE #8

TRASH, DRAPES AND DESK

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)

(10.4m)  
34'-0"



# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE



AUG. 10, 1977

FWS

A.1 - Floor Plan for FIRE #8





## B. FUEL BACKGROUND FOR FIRE #8

### FIRE 8 - OFFICE/BEDROOM FIRE

BUILDING: Two story detached house

OCCUPANTS: All fully capable.

Father aged 45 asleep on couch in family room.

Mother aged 40 in kitchen.

Girl aged 14 in kitchen.

Boy aged 16 in bedroom 2 listening to loud stereo.

FIRE: Fire in trash can next to desk, exposing drapes on window.

DOORS: All doors open except door to bedroom 2 is closed.

FUEL:       Material Code:     WPB001  
          Material ID:     Wastepaper basket, polyethelene, milk cartons,  
                              exp. 7  
          Material Code:     CTN001  
          Material ID:     Curtain, cotton, 0.31 kg/m2, item 9  
          Material Code:     TLV001  
          Material ID:     Television set, B/W, wood cabinet (fuel load  
                              increased to  $\approx$  30 kg)

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Office (bedroom #4 is used as an office)

TIME TO  
FLASHOVER: 15 minutes

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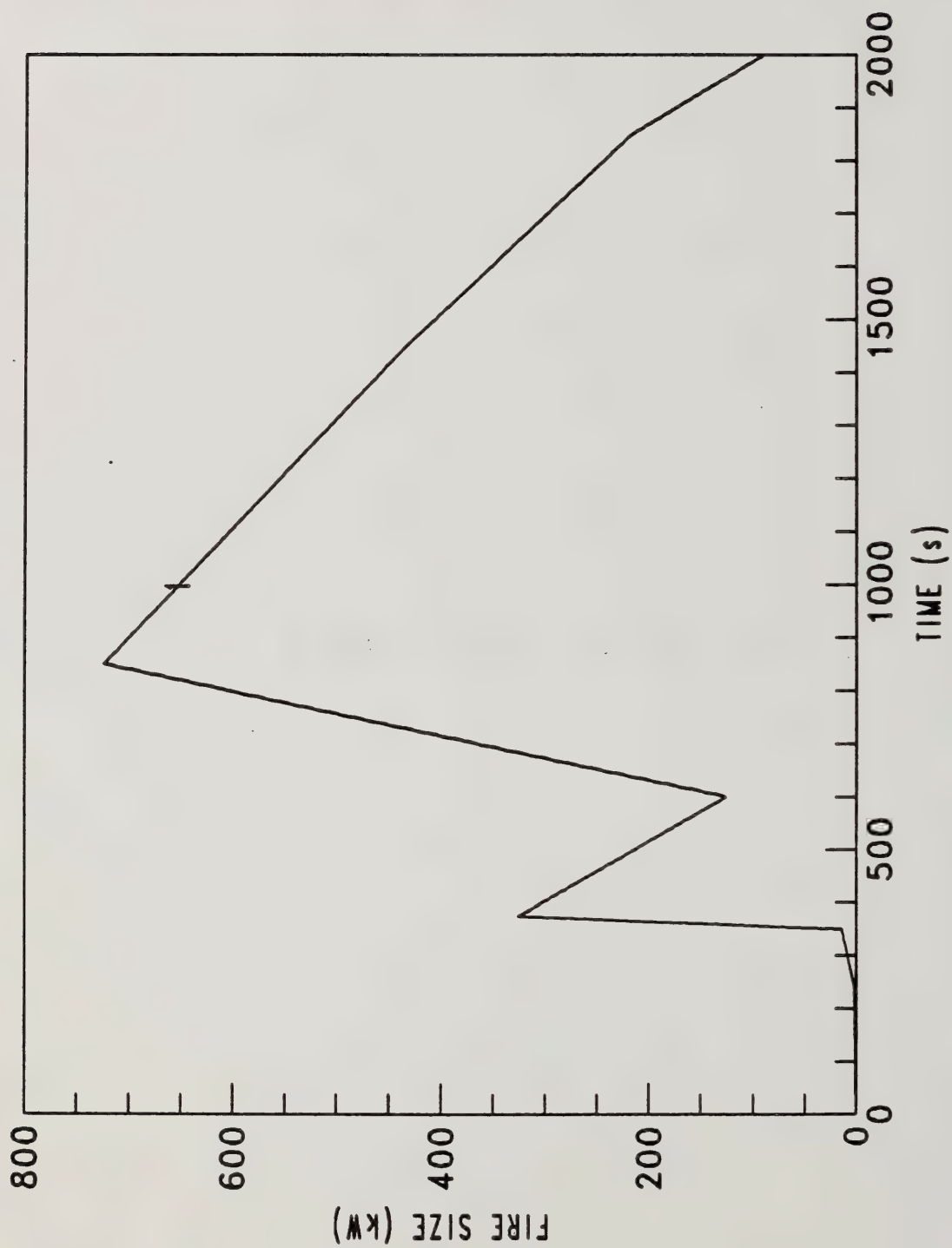
VERSN 17 TWO STORY BUILDING ,OFFICE
TIMES 2000 100 0 0 0 0
NROOM 9
NMXOP 1
TAMB 300
HI/F 0.0 0.0 0.0 0.0 0.0 2.7 2.7 2.7 2.7
WIDTH 3.6 6.4 4.1 1.0 1.0 5.8 3.2 3.2 3.0
DEPTH 4.2 4.2 5.8 3.0 9.0 4.0 3.0 3.0 4.8
HEIGH 2.4 2.4 2.4 2.4 4.9 2.4 2.4 2.4 2.4
HVENT 1 2 1.1 2.1 0.0
HVENT 1 3 1.1 2.1 0.0
HVENT 2 4 1.1 2.10 0.0
HVENT 3 4 1.1 2.10 0.
HVENT 3 5 1.1 2.1 0.0
HVENT 5 6 .01 4.8 2.7
HVENT 5 7 1.1 4.8 2.7
HVENT 5 8 1.1 4.8 2.7
HVENT 2 10 1.1 0.2 0.0
HVENT 5 9 0.01 4.8 2.7
CEILI
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790 790 790 790 790
THICK .016 .016 .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9 .9 .9
WALLS
COND .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790 790 790 790 790
THICK .016 .016 .016 .016 .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9 .9 .9 .9 .9
FLOOR
COND .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0001 .0001
SPHT 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4
DNSTY 300 300 300 300 300 300 300 300 300
THICK .0127 .0127 .0127 .0127 .0127 .0127 .0127 .0127 .0127
EMISS 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
LFBO 7
LFBT 1
LFPOS 1
CHEMI 1.0 0.0 0.0 0.0 0.0 18100 300
LFMAX 8
FTIME 240 110 25 225 250 600 400 150
FMASS 0.0 .0001 .0008 .018 .007 .04 .024 .012 .005
FHIGH 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
CO .03 .03 .03 .03 .03 .03 .03 .03 .03
O2 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4
CO2 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6
OD .02 .02 .02 .02 .02 .02 .02 .02 .02
CT 1. 1. 1. 1. 1. 1. 1. 1. 1.

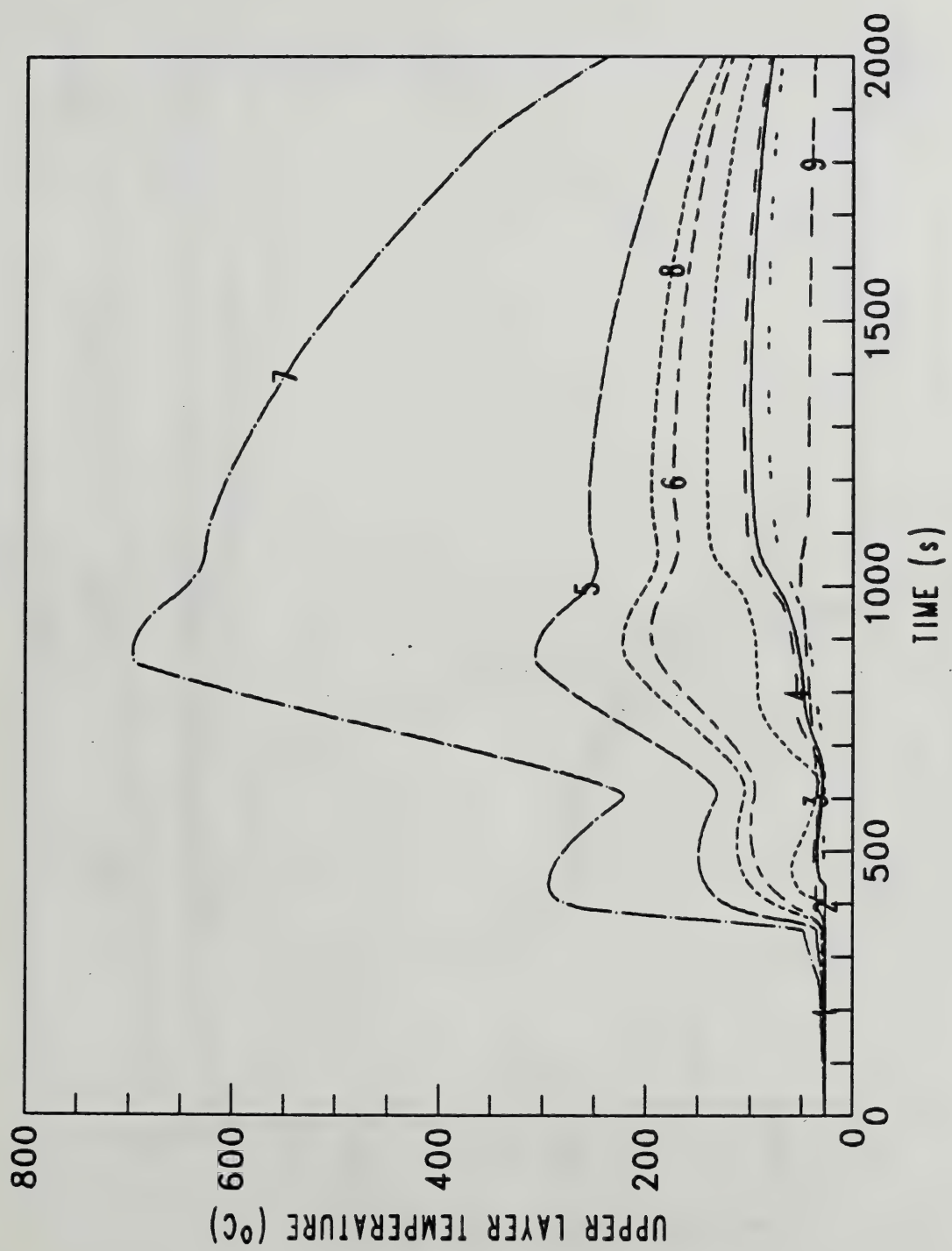
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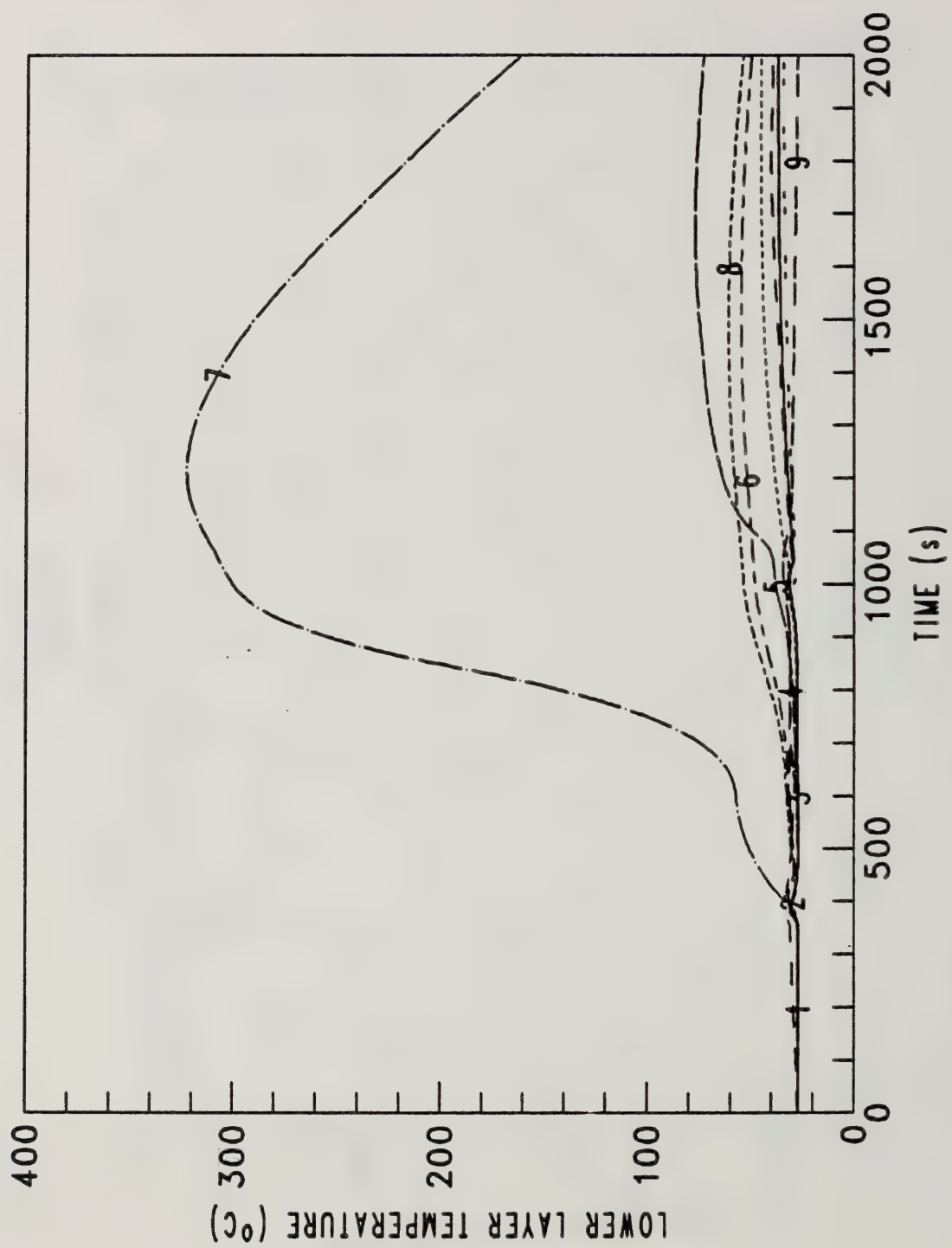


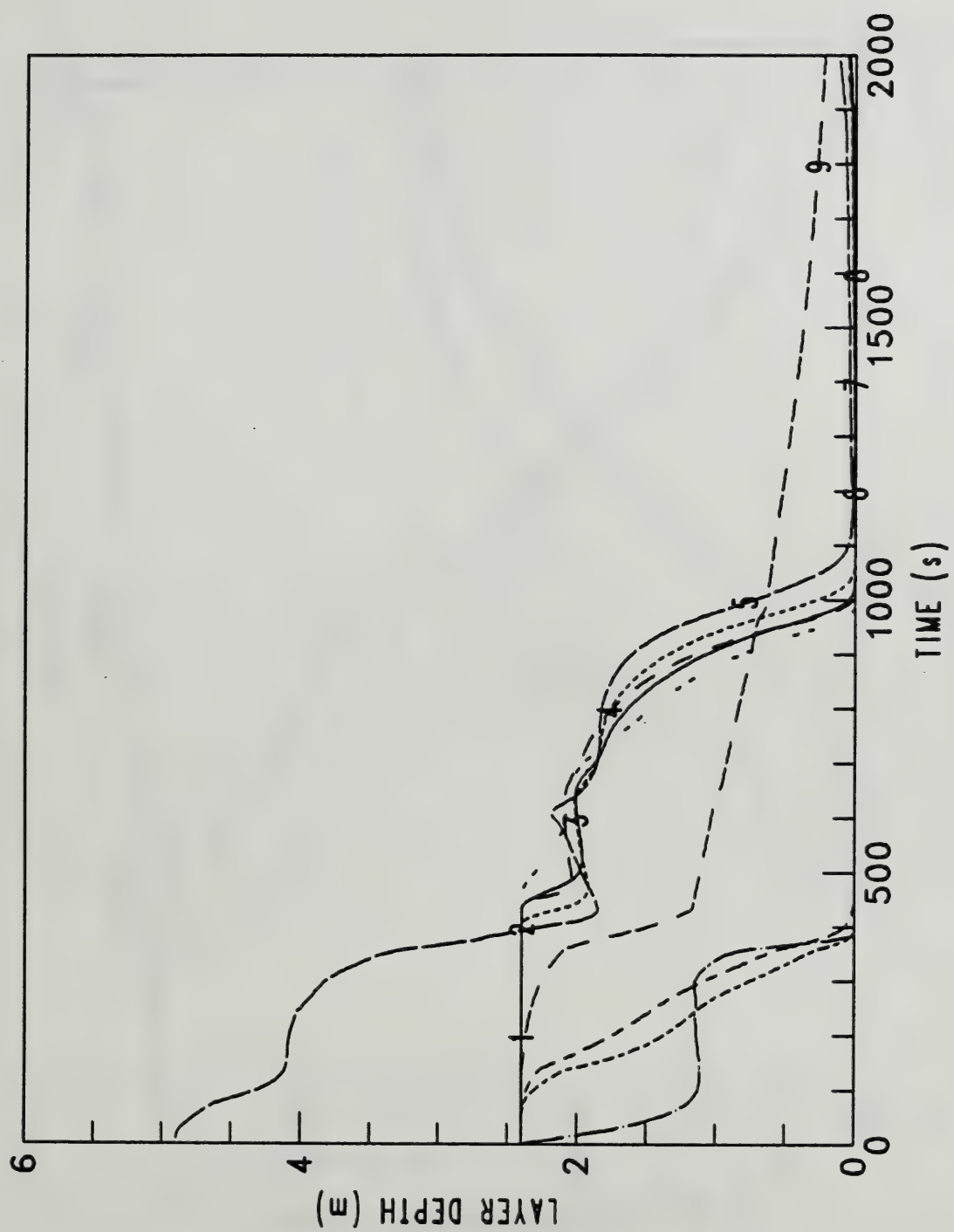
D. OUTPUT - GRAPHS FOR FIRE #8 . .

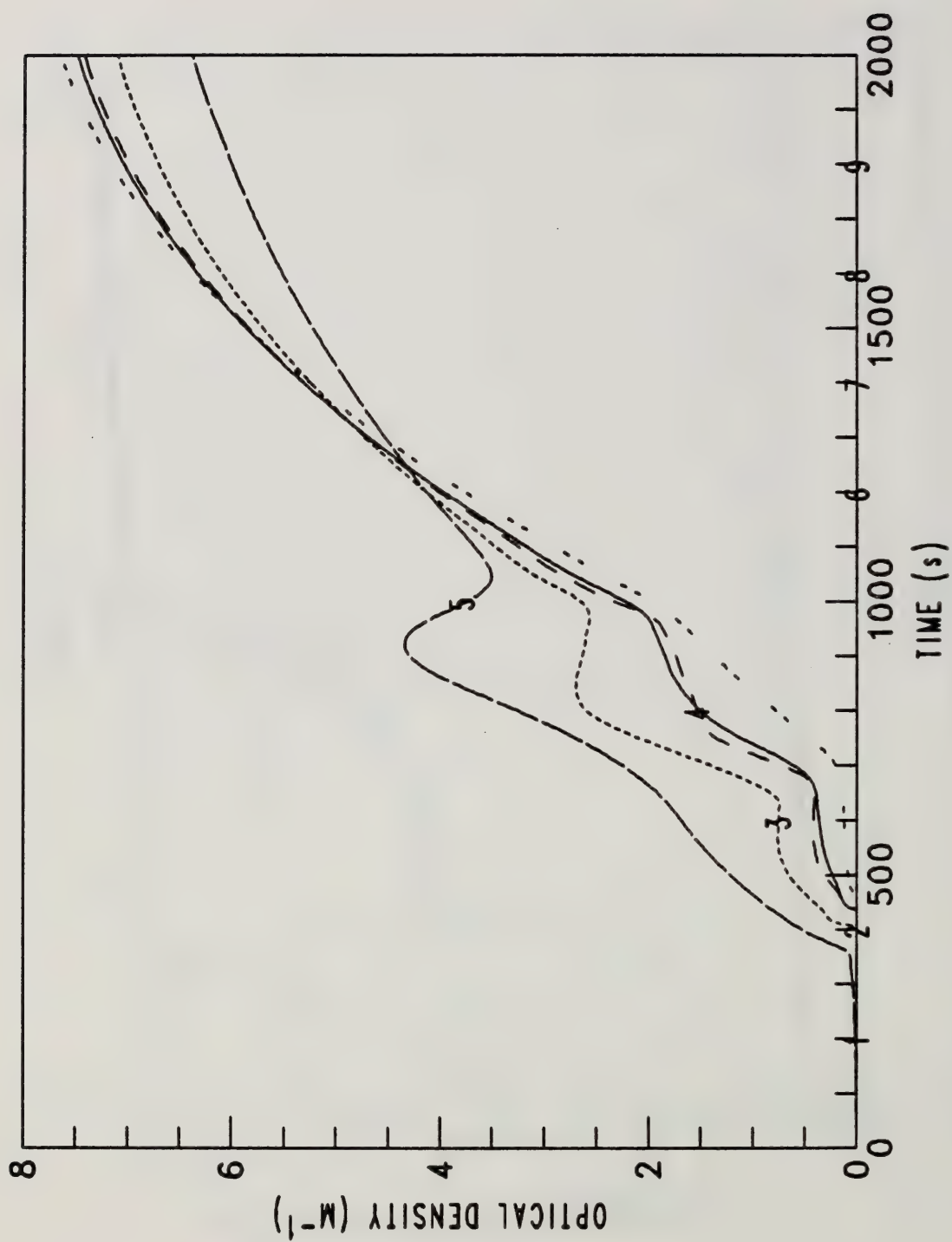




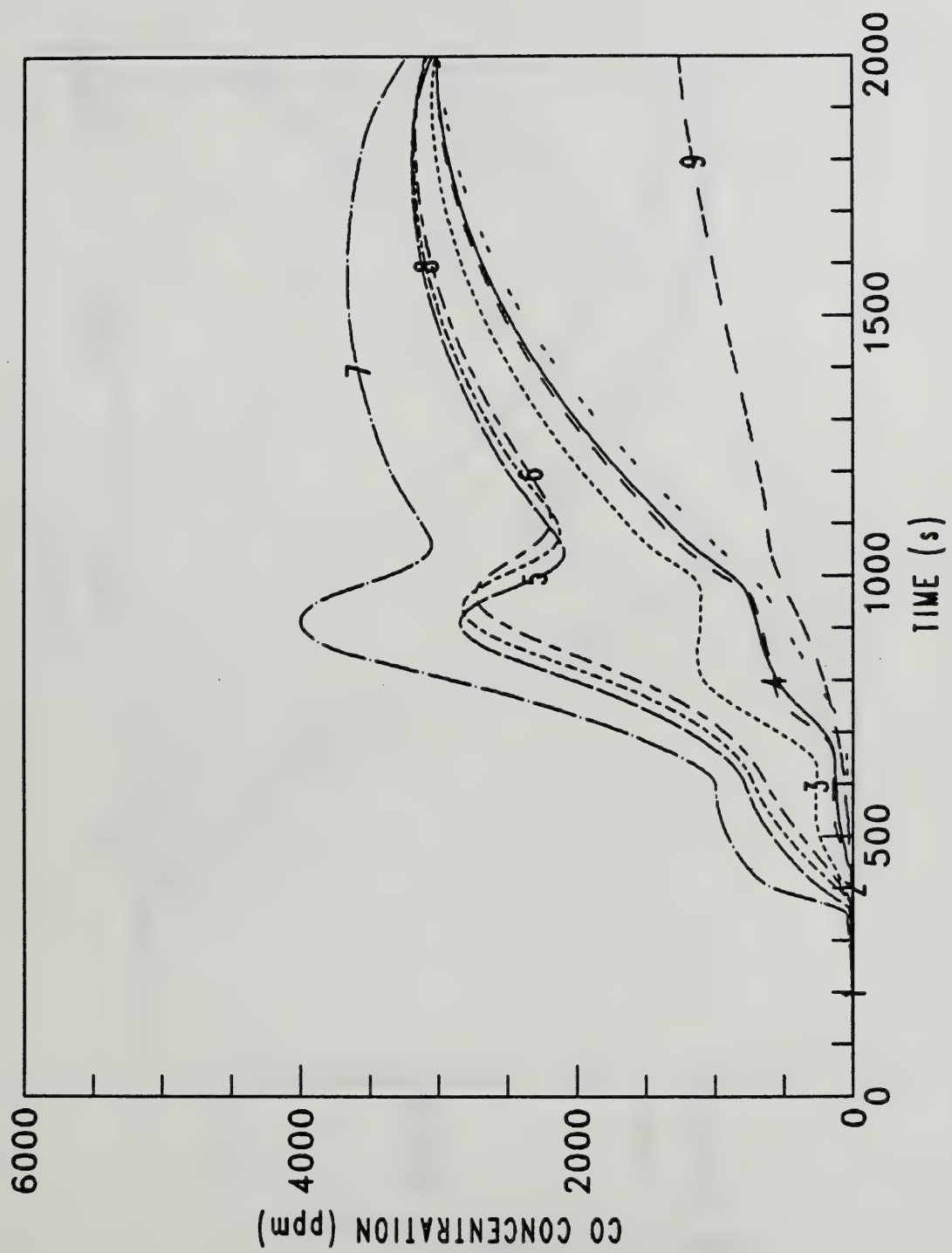


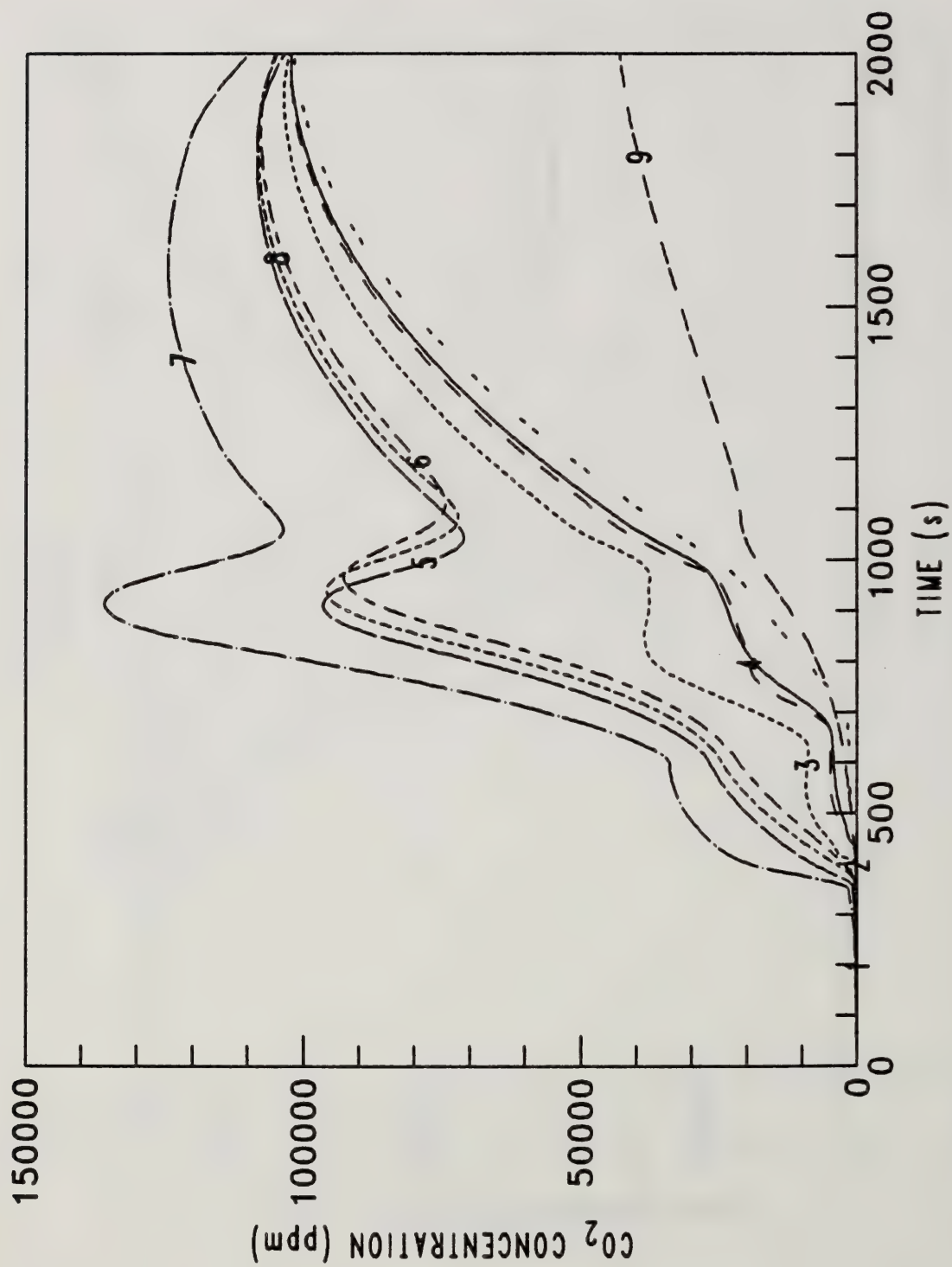


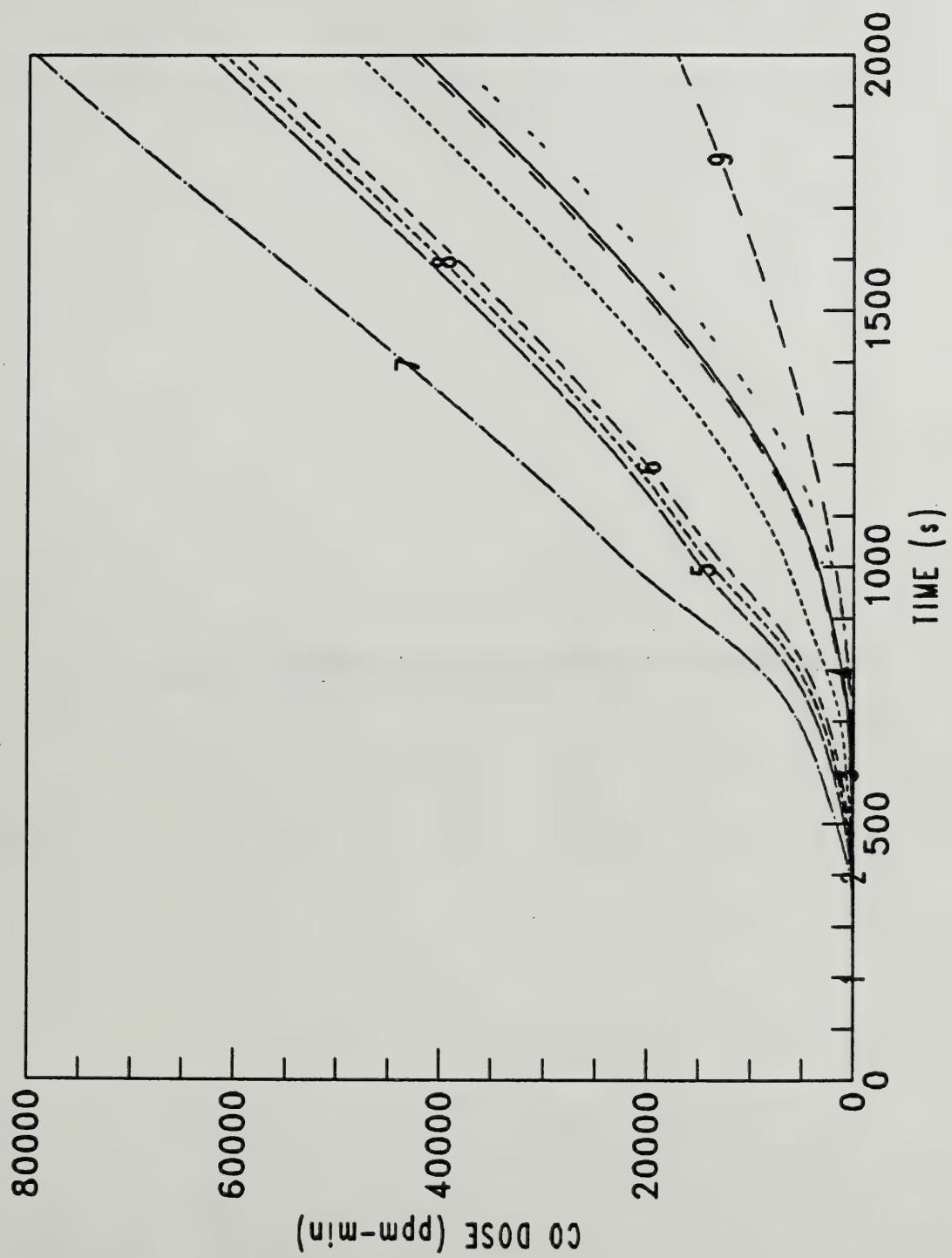














I. OUTPUT - COMPUTER FILES FOR FIRE #6 (5 Compartments)



TWO STORY HOUSE

TOTAL COMPARTMENTS = 5  
MAXIMUM OPENINGS PER PAIR = 1

FLOOR PLAN

WIDTH	3.6	6.4	4.6	6.0	1.0
DEPTH	4.2	4.2	5.8	9.5	9.0
HEIGHT	2.4	2.4	2.4	2.4	4.9
AREA	15.1	26.9	26.7	57.0	9.0
VOLUME	36.3	64.5	64.0	136.8	44.1
CEILING	2.4	2.4	2.4	5.1	4.9
FLOOR	0.0	0.0	0.0	2.7	0.0

CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00
	HH=	0.00	2.10	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	2.10	2.10	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	1.10	0.00	0.00	1.10
	HH=	2.10	0.00	2.10	0.00	0.00	0.02
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	0.00	2.10	0.00	0.00	0.02
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	1.10	0.00	0.00	1.10	0.00
	HH=	2.10	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.04	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00
5 ( 1 )	BW=	0.00	0.00	1.10	0.04	0.00	0.00
	HH=	0.00	0.00	2.10	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	0.00

CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
FLOOR					
COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02

THICK=	1.270E-02	1.270E-02	1.270E-02	1.270E-02
EMISS=	1.000E+00	1.000E+00	1.000E+00	1.000E+00

THICK=	1.270E-02	1.270E-02	1.270E-02	1.270E-02
EMISS=	1.000E+00	1.000E+00	1.000E+00	1.000E+00

## UPPER WALL

	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
COND =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
SPHT =	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
DNSTY=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
THICK=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
EMISS=						

	9.000E-01	9.000E-01	9.000E-01	9.000E-01
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01

	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02

	1.000E-02	1.000E-02	1.000E-02	1.000E-02	1.000E-02
THICK=	1.000E-02	1.000E-02	1.000E-02	1.000E-02	1.000E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

**COPYING**

**LOWER WALL**

	COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
	SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
	DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
	THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
	EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01

DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02

THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01

[illegible]

**FIRE ROOM NUMBER IS 2**

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 13

TOTAL TIME INTERVAL = 1500

FIRE SOURCE = 1

**FIRE TYPE = SPECIFIED**

INITIAL FUEL TEMPERATURE (K) = 300.

INITIAL FUEL TEMPERATURE (K) =  
AMBIENT AIR TEMPERATURE (K) =

AMBIENT AIR TEMPERATURE (K) = 300.0  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30

101.50  
18100.

[illegible][illegible]

**0E+00**

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[illegible][illegible]

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TIME- 0E+02	30.	63.	73.	1.10E+02	30.	50.	1.20E+02	40.	1.30E+02	4.3
0E+02	1.00E+02	30.	63.	73.	1.10E+02	30.	50.	1.20E+02	40.	1.30E+02

TIME = 0.0 SECONDS.

U.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL.VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL.THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL.TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	317.1	355.4	316.8	300.2	300.9
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	17.8	30.2	26.7	1.2	20.9
UL. THICK	1.2	1.1	1.0	0.0	2.3
CE. TEMP	301.4	306.6	301.2	300.0	300.0
UW. TEMP	300.9	304.4	300.8	300.0	300.0
LW. TEMP	300.1	300.5	300.1	300.0	300.0
FL. TEMP	300.2	300.9	300.2	300.0	300.0
PLUME	0.000E+00	5.535E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	7.132E-03	2.213E-02	6.863E-03	9.104E-05	4.885E-04
QSCW	8.185E-03	3.862E-02	8.251E-03	5.898E-05	9.948E-05
	9.640E-02	4.115E-01	9.596E-02	2.660E-04	2.012E-03
	-2.165E-04	-2.061E-03	-1.939E-04	-8.984E-06	2.000E-08

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.046E+05	2.012E+05	2.047E+05	2.069E+05	2.069E+05
CO2 PPM	1.721E+03	4.243E+03	1.651E+03	50.9	95.6
CO PPM	50.7	125.	48.6	1.50	2.82
OD 1/M	0.127	0.280	0.122	3.971E-03	7.439E-03
CT GM/M3	1.01	2.99	0.886	1.484E-02	2.740E-02



TIME = 200.0 SECONDS.

U. TEMP	389.2	487.1	372.3	303.4	325.8
L. TEMP	300.4	301.0	300.3	300.0	300.0
UL. VOLUM	31.9	52.5	56.0	72.5	42.8
UL. THICK	2.1	2.0	2.1	1.3	4.8
CE. TEMP	312.1	333.2	309.8	300.1	302.2
UW. TEMP	308.2	323.1	306.6	300.1	301.5
LW. TEMP	301.4	304.7	301.2	300.0	300.2
FL. TEMP	302.4	307.8	302.0	300.0	300.4
PLUME	0.000E+00	8.250E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	5.608E-02	1.735E-01	3.780E-02	1.612E-03	1.544E-02
	1.108E-01	3.346E-01	8.879E-02	1.699E-03	2.193E-02
QSCW	7.198E-01	1.584E+00	5.570E-01	1.213E-02	1.644E-01
	-6.047E-03	-3.078E-02	-5.061E-03	-1.977E-05	-5.658E-04

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.942E+05	1.861E+05	1.964E+05	2.063E+05	2.023E+05
CO2 PPM	9.251E+03	1.509E+04	7.654E+03	510.	3.431E+03
CO PPM	273.	444.	226.	15.0	101.
OD 1/M	0.557	0.725	0.481	3.932E-02	0.247
CT GM/M3	8.06	14.4	7.31	0.235	2.07

THE FIRE BECAME VENTILATION CONTROLLED AT 293. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 300.0 SECONDS.

U. TEMP	775.0	1334.7	677.6	326.4	480.3
L. TEMP	372.8	748.4	345.0	301.0	311.2
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	412.8	714.7	383.4	303.5	332.7
UW. TEMP	384.9	665.1	359.6	302.4	322.9
LW. TEMP	342.7	574.9	326.5	300.6	306.7
FL. TEMP	374.4	758.1	344.6	301.0	311.4
PLUME	0.000E+00	1.639E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.639E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.967E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	1.670E+00	1.688E+01	8.953E-01	9.662E-03	2.151E-01
QSCW	2.565E+00	1.437E+01	1.577E+00	3.241E-02	4.112E-01
	3.710E+00	5.234E+00	3.062E+00	1.566E-01	1.510E+00
	-2.331E-04	3.014E-04	1.525E-04	-1.109E-06	-2.198E-05
UPPER LAYER SPECIES CONCENTRATION					
O2 PPM	7.754E+04	0.000E+00	1.168E+05	2.138E+05	1.648E+05
CO2 PPM	1.184E+05	1.883E+05	8.649E+04	5.704E+03	4.797E+04
CO PPM	3.488E+03	5.548E+03	2.548E+03	168.	1.413E+03
OD 1/M	3.58	3.30	2.99	0.409	2.34
CT GM/M3	45.6	55.1	39.2	5.35	24.6

TIME = 400.0 SECONDS.

U. TEMP	825.5	1426.5	722.1	324.2	510.1
L. TEMP	474.9	1069.8	405.7	302.0	330.0
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	490.8	1055.6	440.2	305.2	360.4
UW. TEMP	451.9	1007.5	407.4	303.6	344.3
LW. TEMP	402.9	784.0	365.2	301.2	318.4
FL. TEMP	469.1	1079.7	406.6	302.0	330.1
PLUME	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	2.071E+00	1.766E+01	1.092E+00	5.207E-03	2.607E-01
	3.043E+00	1.157E+01	2.008E+00	3.411E-02	5.941E-01
QSCW	3.143E+00	2.394E+00	2.735E+00	1.225E-01	1.468E+00
	1.265E-03	-4.917E-03	-4.624E-04	-7.242E-07	9.694E-06

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.342E+04	0.000E+00	4.112E+04	2.166E+05	6.999E+04
CO2	PPM	/	2.747E+05	3.279E+05	2.230E+05	1.140E+04	1.676E+05
CO	PPM	/	8.093E+03	9.660E+03	6.571E+03	336.	4.939E+03
OD	1/M	/	7.79	5.38	7.23	0.823	7.69
CT	GM/M3	/	187.	162.	164.	19.6	144.

TIME = 500.0 SECONDS.

U. TEMP	954.2	1863.1	832.8	330.2	564.5
L. TEMP	594.1	1783.3	484.5	302.9	356.0
UL. VOLUM	36.3	64.5	64.0	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	585.9	1671.6	504.9	307.0	386.7
UW. TEMP	535.1	1627.9	464.0	304.9	365.4
LW. TEMP	475.0	915.8	415.0	301.7	332.1
FL. TEMP	586.3	1262.9	485.3	303.0	352.2
PLUME	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	3.866E+00	1.092E+02	2.084E+00	6.500E-03	4.090E-01
	4.387E+00	-2.111E+02	3.094E+00	4.339E-02	8.810E-01
QSCW	3.216E+00	1.465E+00	3.031E+00	1.579E-01	1.727E+00
	1.658E-03	-2.855E-02	7.945E-02	-9.330E-07	8.381E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	4.107E+03	0.000E+00	1.540E+04	2.242E+05	2.607E+04
CO2 PPM	4.991E+05	5.650E+05	4.294E+05	3.470E+04	3.592E+05
CO PPM	1.470E+04	1.665E+04	1.265E+04	1.022E+03	1.058E+04
OD 1/M	12.2	7.10	12.1	2.46	14.9
CT GM/M3	424.	312.	392.	56.5	410.

TIME = 600.0 SECONDS.

U. TEMP.	930.1	1733.9	800.9	362.8	551.1
L. TEMP.	589.1	1549.4	488.8	330.5	355.2
U. VOLUM	36.3	64.5	64.0	34.6	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	583.5	1540.0	498.5	319.4	375.8
UW. TEMP	583.5	1540.0	498.5	319.4	375.8
LW. TEMP	468.7	1031.1	409.9	305.8	330.6
FL. TEMP	590.3	1550.2	489.2	310.0	352.6
EMS(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.389E+02	-1.975E+03	-2.028E+02	-5.560E+00	-4.706E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.149E+02	-4.943E+01	-1.600E+02	-2.364E+01	-1.200E+02
	2.383E-02	5.821E-03	7.769E-03	-6.337E+00	3.576E-03
Pres(kpa)	2.082E+01	1.898E+01	2.149E+01	4.790E+01	2.361E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.23	5.78	6.81	1.82	4.47
PPM	1.845E+05	2.642E+05	1.449E+05	3.248E+04	9.502E+04
CO MASS	7.936E-02	0.108	0.128	3.415E-02	8.386E-02
PPM	5.436E+03	7.783E+03	4.270E+03	957.	2.800E+03
OD MASS	5.291E-02	7.226E-02	8.518E-02	2.277E-02	5.591E-02
1/M	5.10	3.92	4.66	2.30	4.44

TIME = 700.0 SECONDS.

U. TEMP.	1059.9	2315.3	905.0	367.7	594.1
L. TEMP.	695.7	2182.2	559.7	331.8	372.1
U. VOLUM	36.3	64.5	64.0	36.1	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	679.5	2176.1	558.5	321.2	393.7
LW. TEMP	679.5	2176.1	558.5	321.2	393.7
LW. TEMP	533.1	1409.0	452.7	306.7	341.3
FL. TEMP	696.7	2183.0	560.0	311.2	370.3
EMS(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.193E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.950E+02	-3.653E+03	-3.314E+02	-6.169E+00	-6.541E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.183E+02	-2.573E+01	-1.764E+02	-2.591E+01	-1.366E+02
	1.460E-02	3.901E-03	4.888E-03	-6.376E+00	-9.172E-04
Pres(kpa)	3.251E+01	3.072E+01	3.309E+01	5.068E+01	3.509E+01

# UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.85	6.07	7.93	2.22	5.50
PPM	2.409E+05	3.705E+05	1.906E+05	3.858E+04	1.260E+05
CO MASS	9.097E-02	0.114	0.149	4.172E-02	0.103
PPM	7.099E+03	1.092E+04	5.617E+03	1.137E+03	3.713E+03
OD MASS	6.065E-02	7.591E-02	9.916E-02	2.781E-02	6.877E-02
1/M	5.85	4.12	5.42	2.70	5.46



TIME = 800.0 SECONDS.

U. TEMP.	1065.0	2139.7	909.9	373.1	603.8
L. TEMP.	762.0	2070.4	608.2	333.2	386.9
U. VOLUM	36.3	64.5	64.0	37.6	44.1
U. DEPTH	2.4	2.4	2.4	0.7	4.9
CE. TEMP	747.6	2065.9	603.3	323.6	408.2
UW. TEMP	747.6	2065.9	603.3	323.6	408.2
LW. TEMP	576.1	1370.3	483.9	307.6	351.4
FL. TEMP	762.2	2068.9	608.3	312.5	386.2
EMS(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.663E+02	-1.583E+03	-3.188E+02	-6.837E+00	-6.839E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-9.137E+01	-1.151E+01	-1.477E+02	-2.805E+01	-1.304E+02
	2.022E-03	-2.085E-03	6.034E-04	-6.413E+00	2.255E-04
Pres(kpa)	2.516E+01	2.334E+01	2.581E+01	5.363E+01	2.799E+01

UPPER LAYER SPECIES CONCENTRATION

	5.10	6.07	8.34	2.72	5.95
CO2 MASS	2.544E+05	3.424E+05	2.015E+05	4.588E+04	1.384E+05
PPM	9.558E-02	0.114	0.156	5.094E-02	0.111
CO MASS	7.494E+03	1.009E+04	5.937E+03	1.352E+03	4.078E+03
PPM	6.372E-02	7.590E-02	0.104	3.396E-02	7.432E-02
OD MASS	6.15	4.12	5.70	3.16	5.90
1/M					

TIME = 900.0 SECONDS.

U. TEMP.	1006.5	1766.2	860.0	367.3	586.8
L. TEMP.	756.9	1714.5	608.1	331.8	395.4
U. VOLUM	36.3	64.5	64.0	36.9	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	747.8	1712.5	606.2	324.2	413.4
UW. TEMP	747.8	1712.5	606.2	324.2	413.4
LW. TEMP	579.7	1195.3	488.1	308.2	356.5
FL. TEMP	756.9	1713.5	608.1	313.2	393.0
EMS(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.687E+02	-6.549E+02	-2.378E+02	-5.883E+00	-5.816E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-7.174E+01	-8.605E+00	-1.183E+02	-2.350E+01	-1.126E+02
	1.802E-04	-8.202E-04	2.149E-04	-5.807E+00	3.023E-03
Pres(kpa)	1.366E+01	1.197E+01	1.437E+01	5.201E+01	1.665E+01

UPPER LAYER SPECIES CONCENTRATION

	5.00	6.04	8.33	2.72	6.03
CO2 MASS	2.358E+05	2.812E+05	1.901E+05	4.607E+04	1.363E+05
CO PPM	9.376E-02	0.113	0.156	5.109E-02	0.113
OD MASS	6.949E+03	8.285E+03	5.602E+03	1.358E+03	4.017E+03
OD MASS	6.251E-02	7.551E-02	0.104	3.406E-02	7.533E-02
1/M	6.03	4.10	5.69	3.23	5.98

TIME = 1000.0 SECONDS.

U. TEMP.	945.5	1481.3	810.1	359.8	564.4
L. TEMP.	728.7	1440.7	591.0	329.3	394.3
U. VOLUM	36.3	64.5	64.0	35.4	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	724.0	1440.9	592.7	323.2	412.5
UW. TEMP	724.0	1440.9	592.7	323.2	412.5
LW. TEMP	570.6	1064.8	483.1	308.2	357.8
FL. TEMP	728.6	1440.0	591.0	313.0	393.0
EMS(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.979E+02	-2.950E+02	-1.778E+02	-4.836E+00	-4.724E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-6.065E+01	-6.642E+00	-9.978E+01	-1.898E+01	-9.643E+01
	-1.115E-04	-5.058E-04	-1.675E-05	-5.052E+00	1.692E-03
Pres(kpa)	5.450E+00	3.922E+00	6.205E+00	4.847E+01	8.522E+00

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.89	6.20	8.29	2.56	6.01
PPM	2.166E+05	2.420E+05	1.784E+05	4.426E+04	1.308E+05
CO MASS	9.168E-02	0.116	0.155	4.796E-02	0.113
PPM	6.382E+03	7.131E+03	5.255E+03	1.304E+03	3.855E+03
OD MASS	6.112E-02	7.749E-02	0.104	3.197E-02	7.516E-02
1/M	5.90	4.20	5.67	3.17	5.97

TIME = 1100.0 SECONDS.

U. TEMP.	896.5	1299.1	772.5	354.2	548.5
L. TEMP.	692.6	1243.2	569.0	327.1	389.9
U. VOLUM	36.3	64.5	64.0	33.9	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	691.0	1234.8	573.1	321.7	408.9
UW. TEMP	691.0	1234.8	573.1	321.7	408.9
LW. TEMP	556.2	963.4	474.4	308.1	357.3
FL. TEMP	692.4	1233.6	568.3	312.4	389.9
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.580E+02	-3.074E+02	-1.441E+02	-4.151E+00	-4.076E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.686E+01	-1.367E+01	-9.176E+01	-1.618E+01	-8.756E+01
	-1.347E-04	-3.538E-02	-1.356E-05	-4.489E+00	-1.443E-06
Pres(kpa)	9.241E-01	-4.246E-01	1.674E+00	4.536E+01	3.936E+00

# UPPER LAYER SPECIES CONCENTRATION

	4.84	6.42	8.31	2.40	5.99
C02 MASS	2.034E+05	2.199E+05	1.704E+05	4.267E+04	1.267E+05
PPM	9.082E-02	0.120	0.156	4.502E-02	0.112
CO MASS	5.994E+03	6.480E+03	5.020E+03	1.257E+03	3.734E+03
PPM	6.055E-02	8.028E-02	0.104	3.002E-02	7.492E-02
OD MASS	5.84	4.36	5.67	3.10	5.95
1/M					

TIME = 1200.0 SECONDS.

U. TEMP.	873.7	1215.3	756.2	351.9	542.2
L. TEMP.	666.9	1188.6	553.5	326.1	387.1
U. VOLUM	36.3	64.4	64.0	33.2	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	667.0	1115.6	558.7	320.6	406.3
UW. TEMP	667.0	1115.6	558.7	320.6	406.3
LW. TEMP	546.3	902.8	468.4	307.9	356.9
FL. TEMP	666.8	1115.2	552.0	311.8	387.1
EMS(I)=	0.000E+00	6.125E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.457E+02	-3.699E+02	-1.334E+02	-3.920E+00	-3.858E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.848E+01	-2.588E+01	-9.197E+01	-1.539E+01	-8.515E+01
	-1.293E-04	-5.705E-01	4.387E-03	-4.291E+00	-4.313E-06
Pres(kpa)	-6.405E-01	-1.892E+00	1.064E-01	4.402E+01	2.347E+00

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.85	6.60	8.33	2.33	5.99
PPM	1.984E+05	2.118E+05	1.673E+05	4.199E+04	1.252E+05
CO MASS	9.087E-02	0.124	0.156	4.375E-02	0.112
PPM	5.846E+03	6.240E+03	4.928E+03	1.237E+03	3.688E+03
OD MASS	6.058E-02	8.251E-02	0.104	2.917E-02	7.486E-02
1/M	5.84	4.48	5.69	3.07	5.94



TIME = 1300.0 SECONDS.

U. TEMP.	853.4	1145.0	741.7	350.2	536.7
L. TEMP.	645.3	1145.7	539.9	325.4	384.5
U. VOLUM	36.3	64.2	64.0	32.8	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	646.6	1022.9	546.5	319.8	403.8
UW. TEMP	646.6	1022.9	546.5	319.8	403.8
LW. TEMP	537.2	850.2	463.0	307.7	356.3
FL. TEMP	645.2	1023.2	538.3	311.3	384.5
EMS(I)=	0.000E+00	7.698E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.347E+02	-3.642E+02	-1.242E+02	-3.765E+00	-3.679E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.954E+01	-3.549E+01	-9.182E+01	-1.488E+01	-8.320E+01
	-8.989E-05	-1.208E+00	4.519E-03	-4.160E+00	-3.129E-06
Pres(kpa)	-2.052E+00	-3.225E+00	-1.305E+00	4.303E+01	9.281E-01

# UPPER LAYER SPECIES CONCENTRATION

	4.85	6.74	8.35	2.28	5.97
C02 MASS	1.940E+05	2.043E+05	1.644E+05	4.149E+04	1.236E+05
PPM	9.098E-02	0.126	0.156	4.280E-02	0.112
CO MASS	5.716E+03	6.018E+03	4.843E+03	1.222E+03	3.642E+03
PPM	6.065E-02	8.426E-02	0.104	2.853E-02	7.468E-02
OD MASS	5.85	4.59	5.70	3.05	5.93
1/M					

TIME = 1400.0 SECONDS.

U. TEMP.	830.8	1075.2	725.5	348.6	530.6
L. TEMP.	624.2	1105.8	526.8	324.7	381.8
U. VOLUM	36.3	64.0	64.0	32.3	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	626.8	940.3	534.6	318.9	401.2
UW. TEMP	626.8	940.3	534.6	318.9	401.2
LW. TEMP	527.0	798.7	456.9	307.5	355.5
FL. TEMP	624.1	940.6	525.2	310.8	381.8
EMS(I)=	0.000E+00	7.740E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.222E+02	-3.233E+02	-1.138E+02	-3.610E+00	-3.482E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-5.962E+01	-4.245E+01	-9.052E+01	-1.433E+01	-8.088E+01
	-6.847E-05	-1.957E+00	4.681E-03	-4.031E+00	-3.075E-06
Pres(kpa)	-3.645E+00	-4.728E+00	-2.901E+00	4.202E+01	-6.897E-01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.86	6.87	8.36	2.23	5.95
PPM	1.891E+05	1.960E+05	1.610E+05	4.099E+04	1.217E+05
CO MASS	9.109E-02	0.129	0.157	4.184E-02	0.112
PPM	5.572E+03	5.776E+03	4.743E+03	1.208E+03	3.586E+03
OD MASS	6.073E-02	8.586E-02	0.104	2.789E-02	7.436E-02
1/M	5.86	4.69	5.71	3.03	5.90

TIME = 1500.0 SECONDS.

U. TEMP.	807.0	1008.3	708.3	346.9	524.0
L. TEMP.	603.3	1069.8	513.8	324.0	379.0
U. VOLUM	36.3	63.7	64.0	31.7	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	607.2	865.8	522.8	318.2	398.4
UW. TEMP	607.2	865.8	522.8	318.2	398.4
LW. TEMP	516.0	749.3	450.1	307.3	354.3
FL. TEMP	603.2	865.6	512.2	310.4	379.0
EMS(I)=	0.000E+00	5.978E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-1.094E+02	-2.745E+02	-1.032E+02	-3.457E+00	-3.277E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-5.921E+01	-4.780E+01	-8.862E+01	-1.377E+01	-7.836E+01
	-5.302E-05	-2.884E+00	4.877E-03	-3.903E+00	-3.200E-06
Pres(kpa)	-5.338E+00	-6.329E+00	-4.599E+00	4.102E+01	-2.414E+00

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	4.86	6.98	8.36	2.18	5.92
PPM	1.839E+05	1.877E+05	1.573E+05	4.049E+04	1.195E+05
CO MASS	9.121E-02	0.131	0.157	4.087E-02	0.111
PPM	5.419E+03	5.531E+03	4.633E+03	1.193E+03	3.522E+03
OD MASS	6.081E-02	8.725E-02	0.105	2.725E-02	7.396E-02
1/M	5.86	4.79	5.71	3.00	5.87

EXECUTION TIME = 170.31



FIRE #7

COUCH AND PANELLING

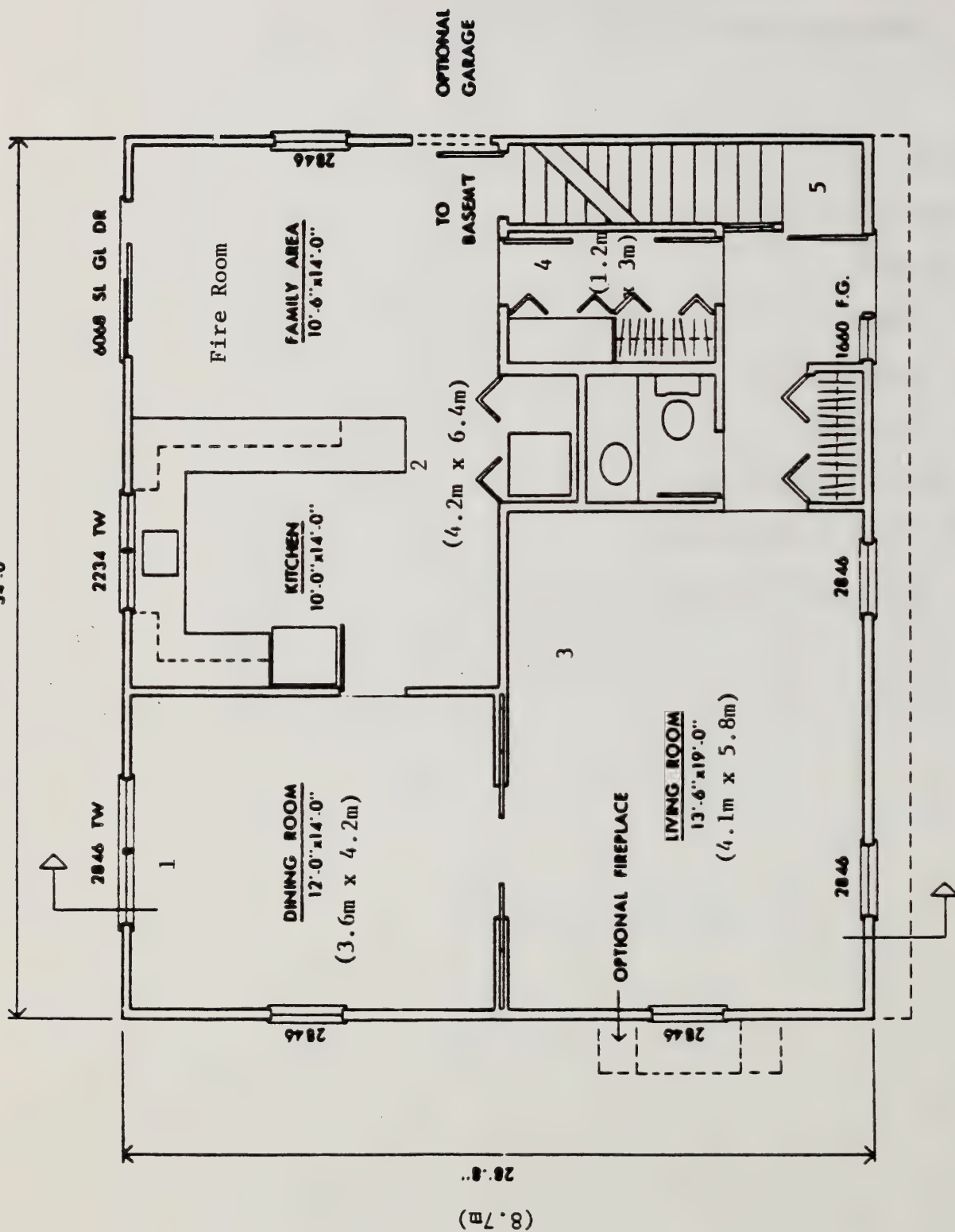
(Passageway between kitchen and family room closed)

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)



(10.4m)

34'0"



# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG. 10.1977

NBS

A.1 - Floor Plan for FIRE #7



## B. FUEL LOAD BACKGROUND FOR FIRE #7

### FIRE 7 - FAMILY ROOM

BUILDING: Two-story detached house

OCCUPANTS: All fully capable except as noted.

Father aged 45 asleep in bedroom 1.

Mother aged 40 asleep in bedroom 1.

Boy aged 16 asleep in bedroom 2 - sleeping penalty = 15.

Girl aged 14 asleep in bedroom 3.

FIRE: Cigarette fire in family room couch spreading to panelling.

DOORS: Doors to passageway between kitchen/family room and front hall closed, other downstairs door open, all bedroom doors closed.

FUEL: Material Code: UPS001  
Material ID: Upholstered sofa, F32, wood frame, PU foam FR olefin.

Panelling: See NBSIR 85-2988 - The Effect of Wall and Room Services on the Rate of Heat, Smoke, and Carbon Monoxide Production in a Park Lodging Bedroom Fire-Test #R5 and Tests #R2.

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Family room (first floor)

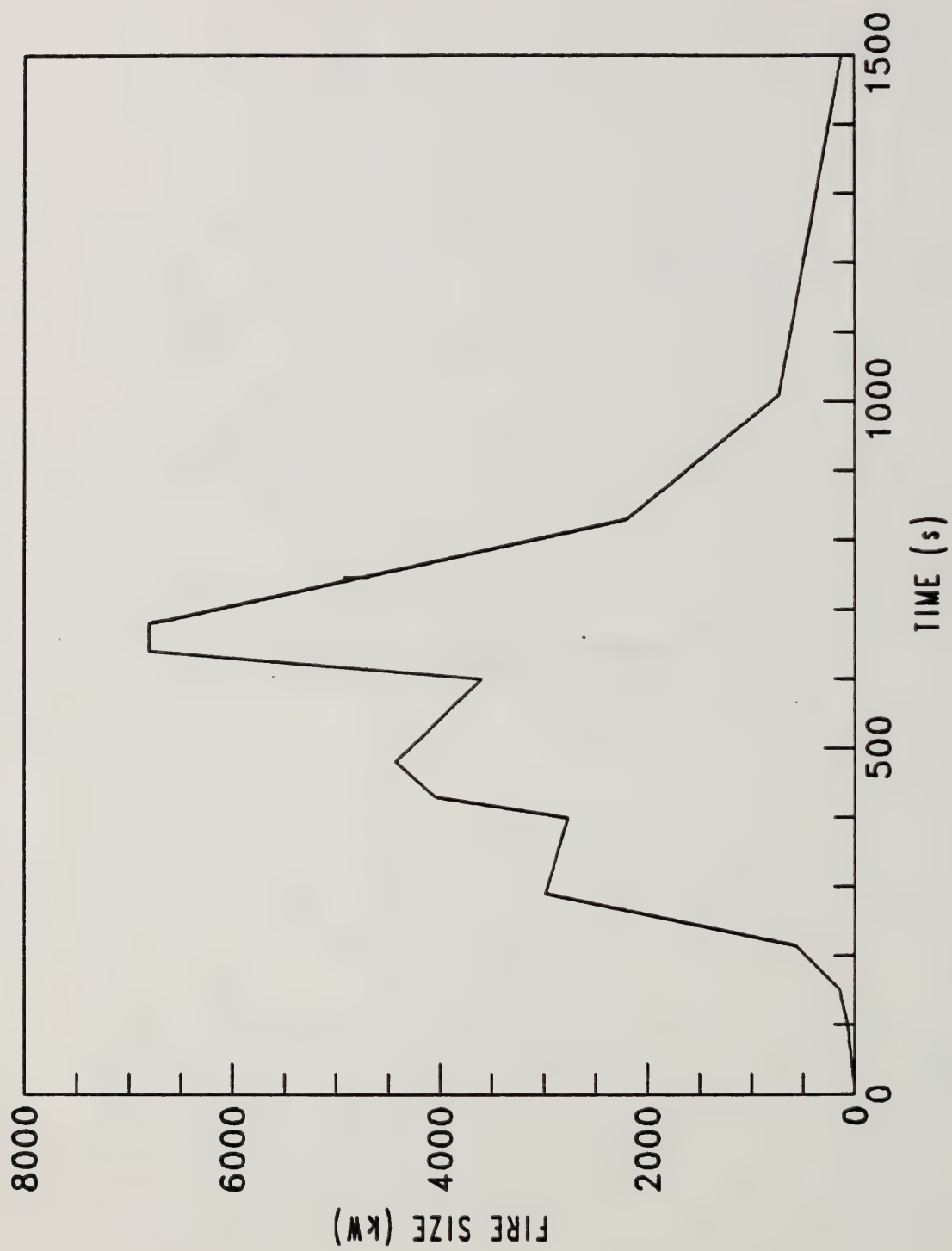
TIME TO  
FLASHOVER: 4 minutes

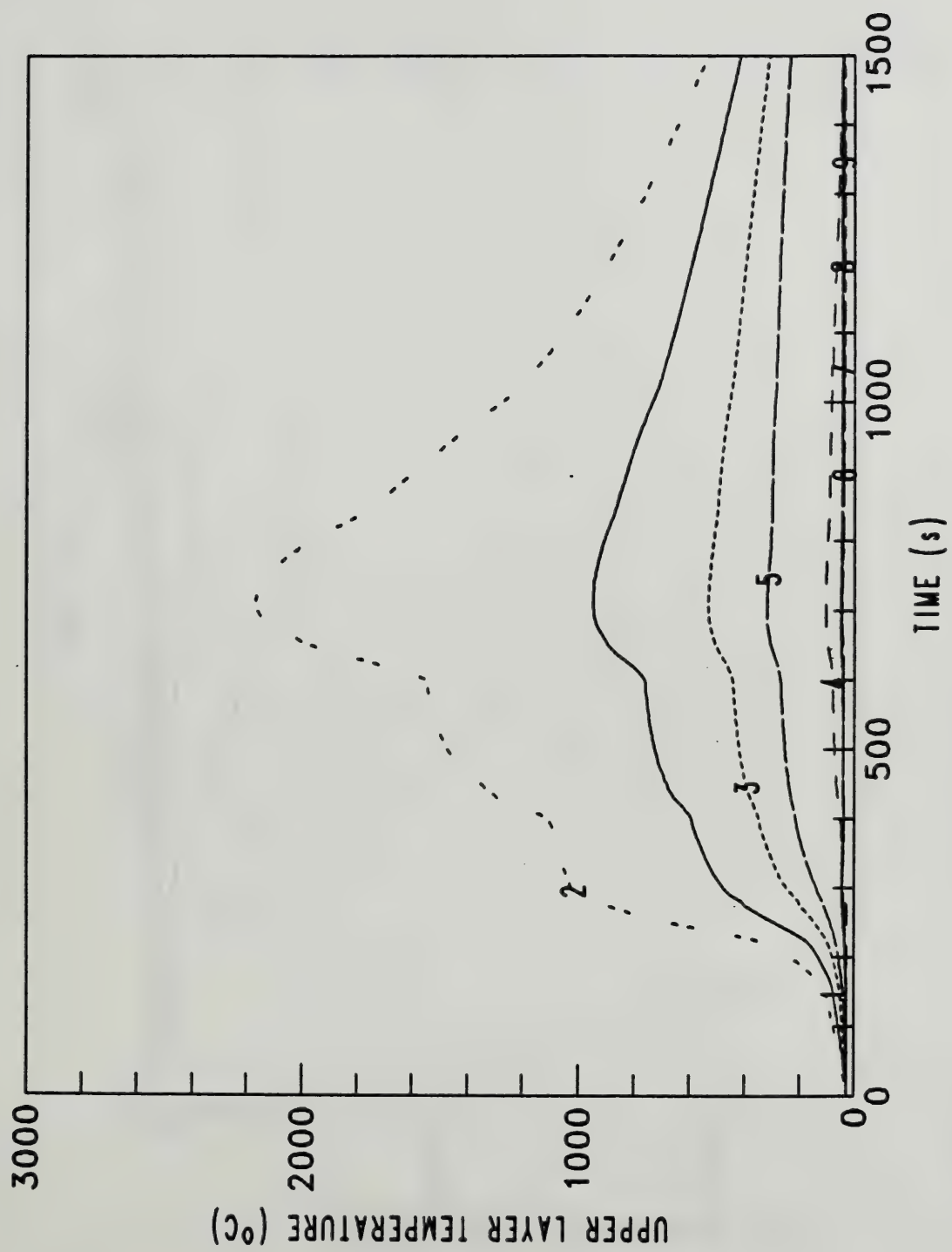
VERSN	017 TWO STORY HOUSE -PASSAGE													
TIMES	1500	100	0	0	0	0								
NROOM	9													
NMXOP	1													
TAMB	300													
HI/F	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7					
WIDTH	3.6	6.4	4.1	1.0	1.0	5.8	3.2	3.2	3.0					
DEPTH	4.2	4.2	5.8	3.0	9.0	4.0	3.0	3.0	4.8					
HEIGH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4					
HVENT	1	2	1.1	2.1	0.0									
HVENT	1	3	1.1	2.1	0.0									
HVENT	2	4	.01	2.1	0.0									
HVENT	3	4	.01	2.1	0.									
HVENT	3	5	1.1	2.1	0.0									
HVENT	5	6	.01	4.8	2.7									
HVENT	5	7	.01	4.8	2.7									
HVENT	5	8	.01	4.8	2.7									
HVENT	2	10	1.1	0.2	0.0									
HVENT	5	9	.01	4.8	2.7									
CEILI														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9					
DNSTY	790	790	790	790	790	790	790	790	790	790				
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016			
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9					
WALLS														
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9					
DNSTY	790	790	790	790	790	790	790	790	790	790				
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016			
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9					
FLOOR														
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4				
DNSTY	300	300	300	300	300	300	300	300	300	300				
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
LFBO	2													
LFBT	1													
LFPOS	1													
CHEMI	1.0	0.0	0.0	0.0	0.0	0.0	18100	300						
LFMAX	13													
FTIME	100	50	65	75	110	30	50	120	40	40	150	180	490	
FMASS	0.0	.004	.008	.032	.162	.153	.224	.245	.199	.376	.376	.122	.041	0.0
PHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.

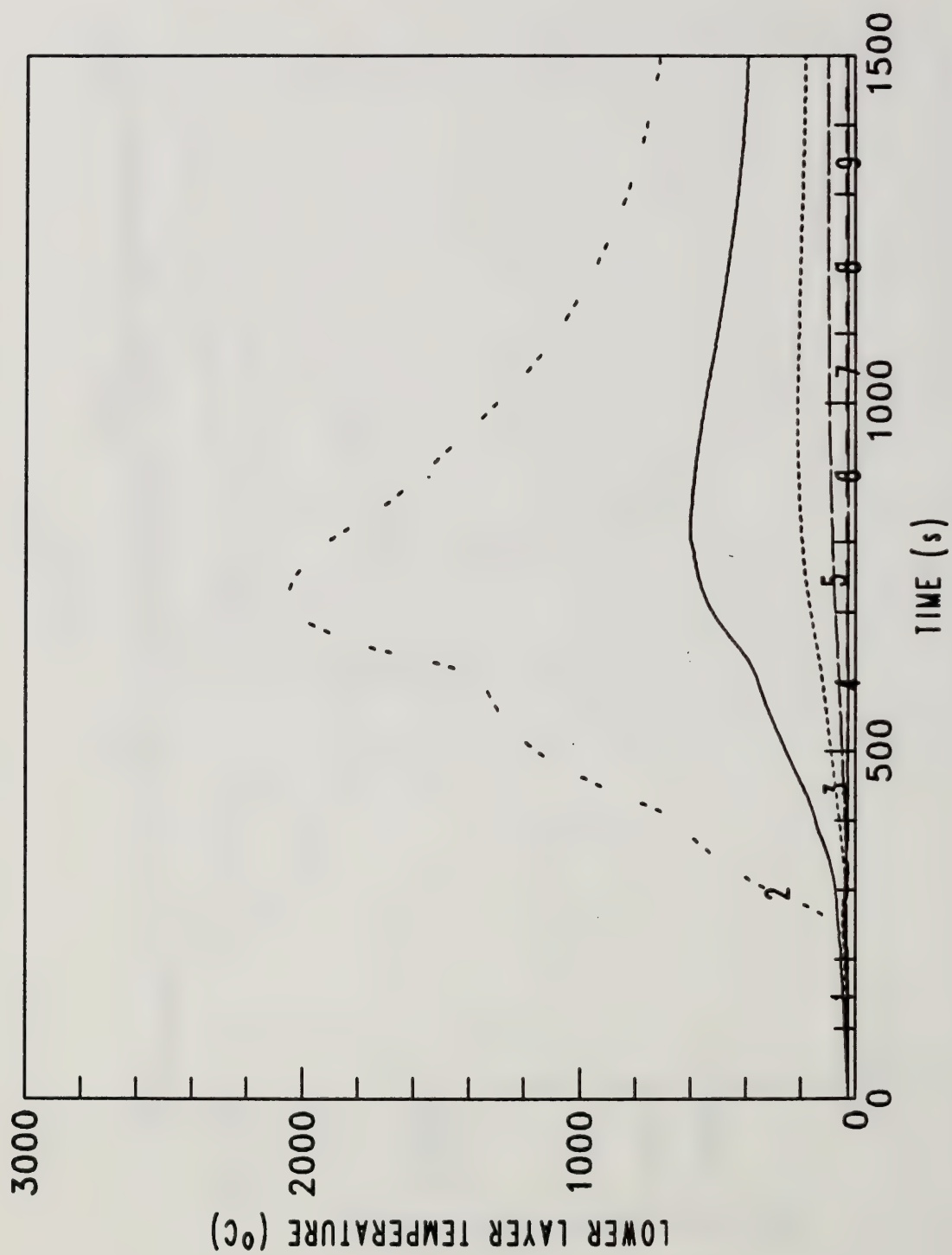


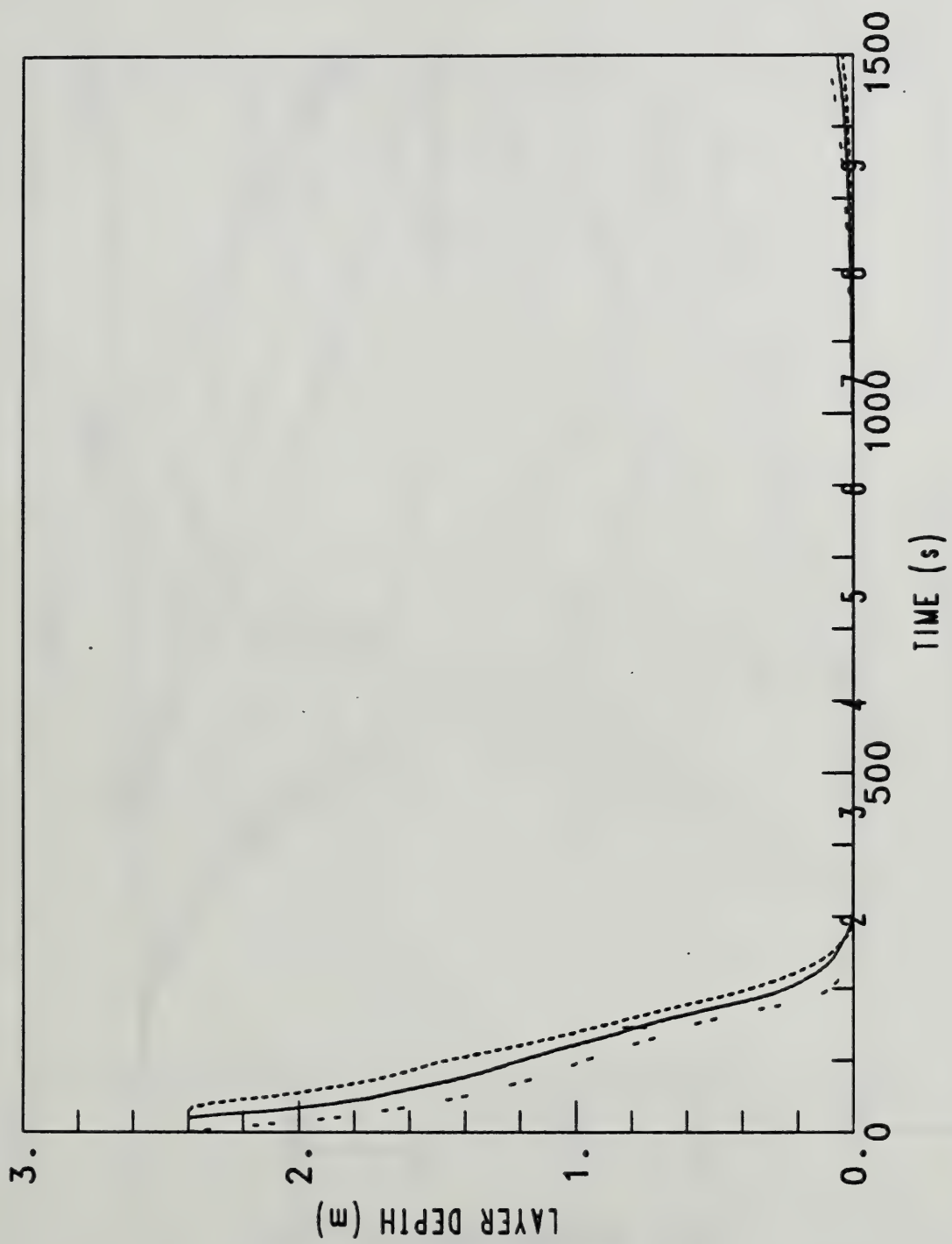


D. OUTPUT - GRAPHS FOR FIRE #7

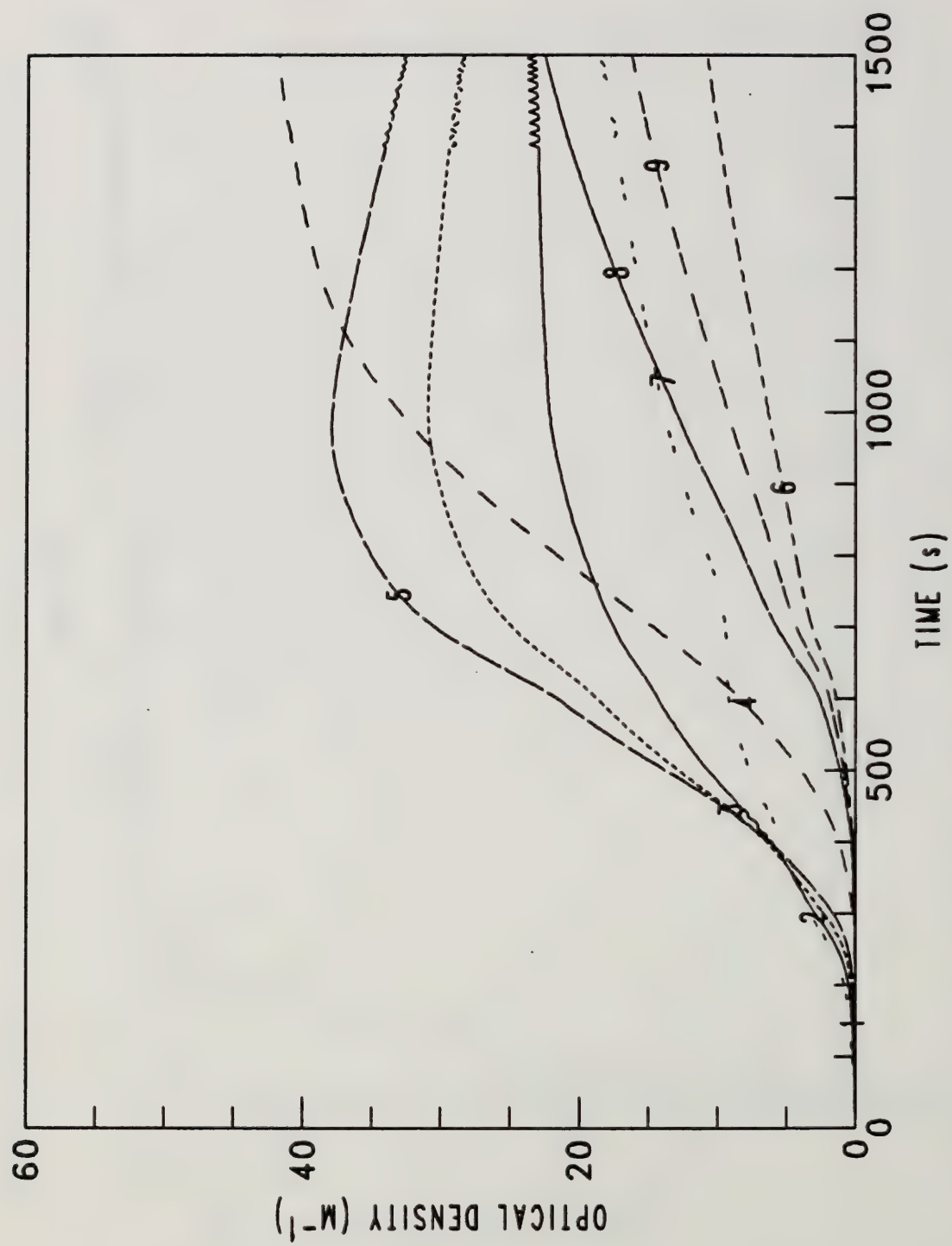


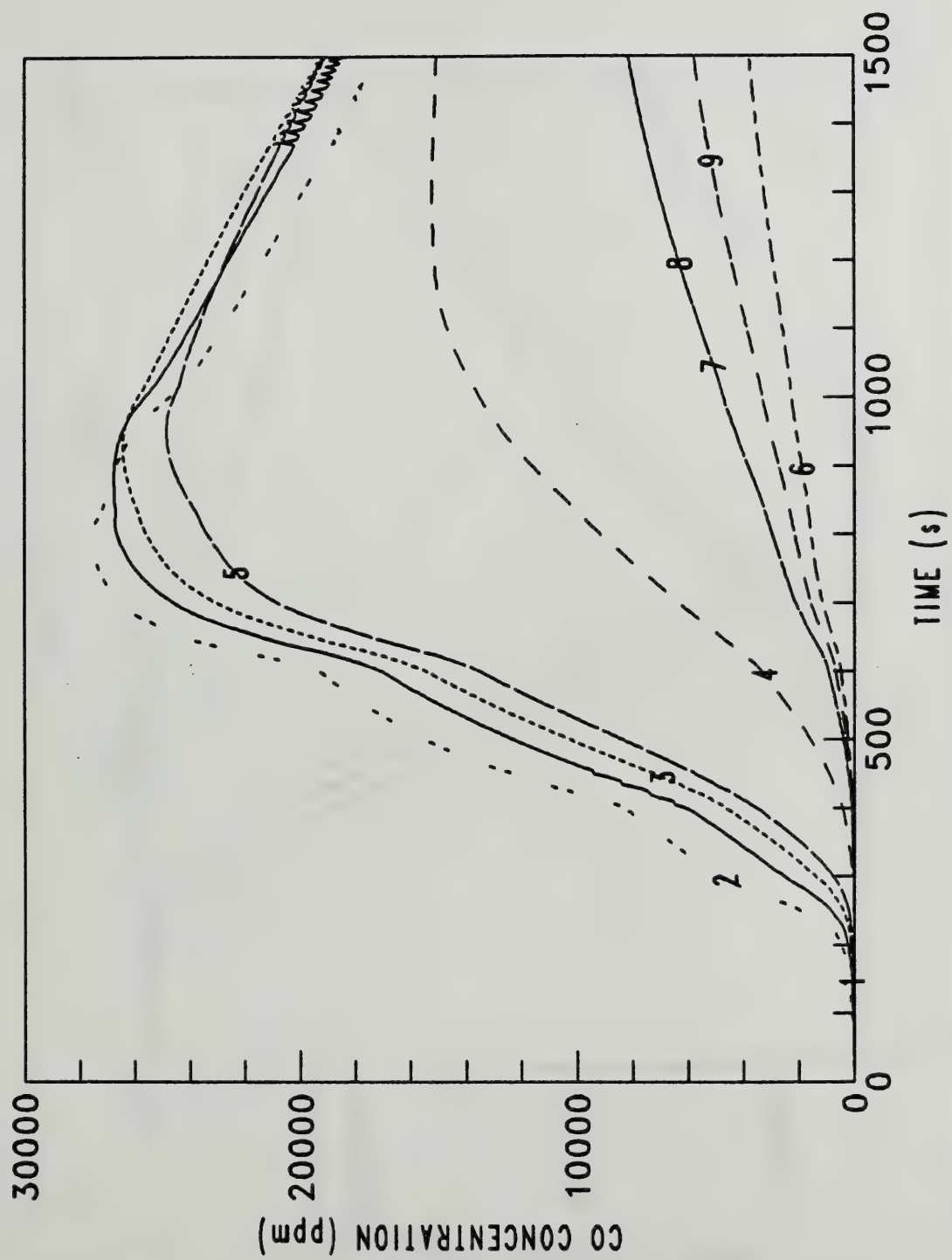


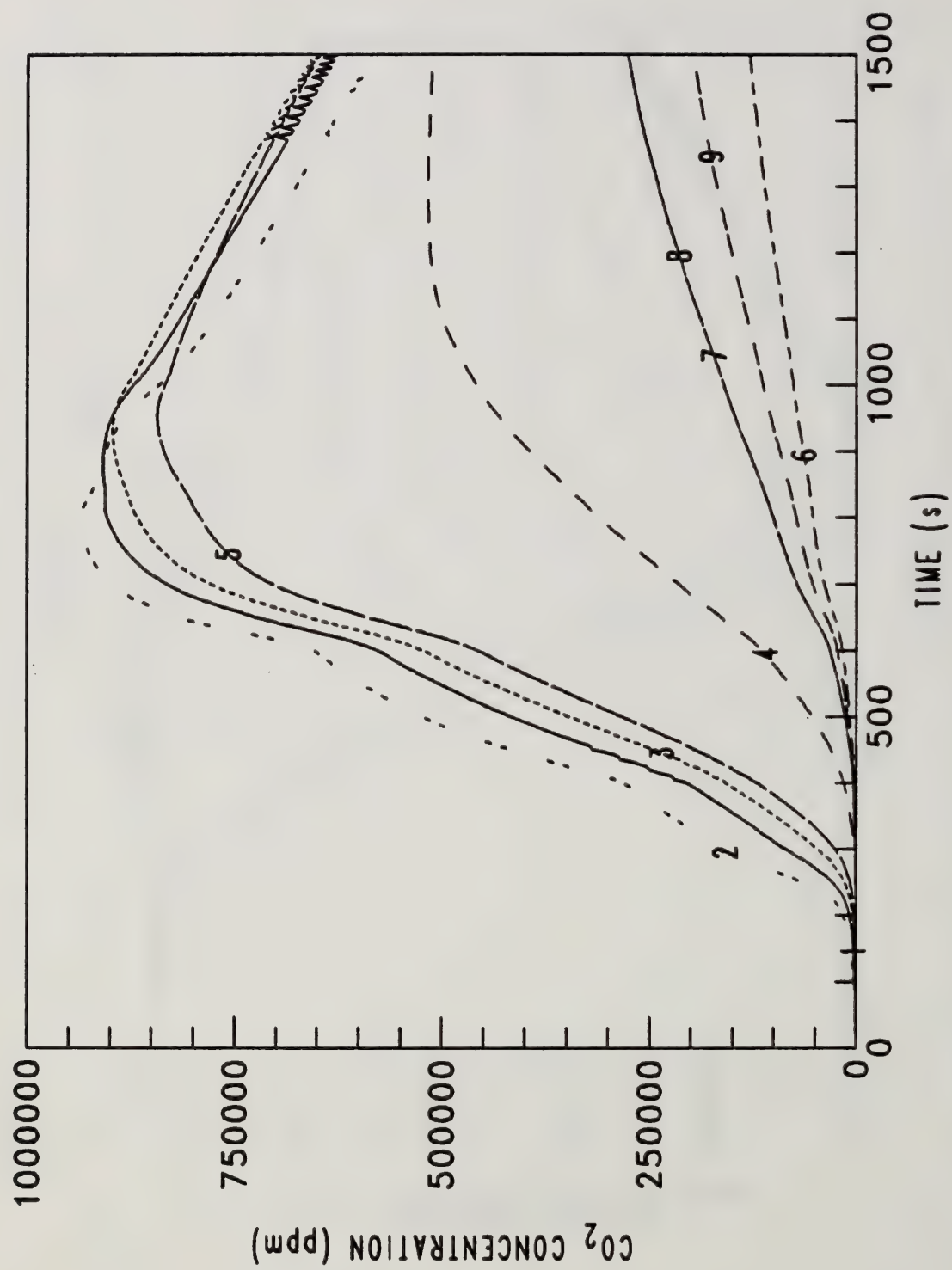


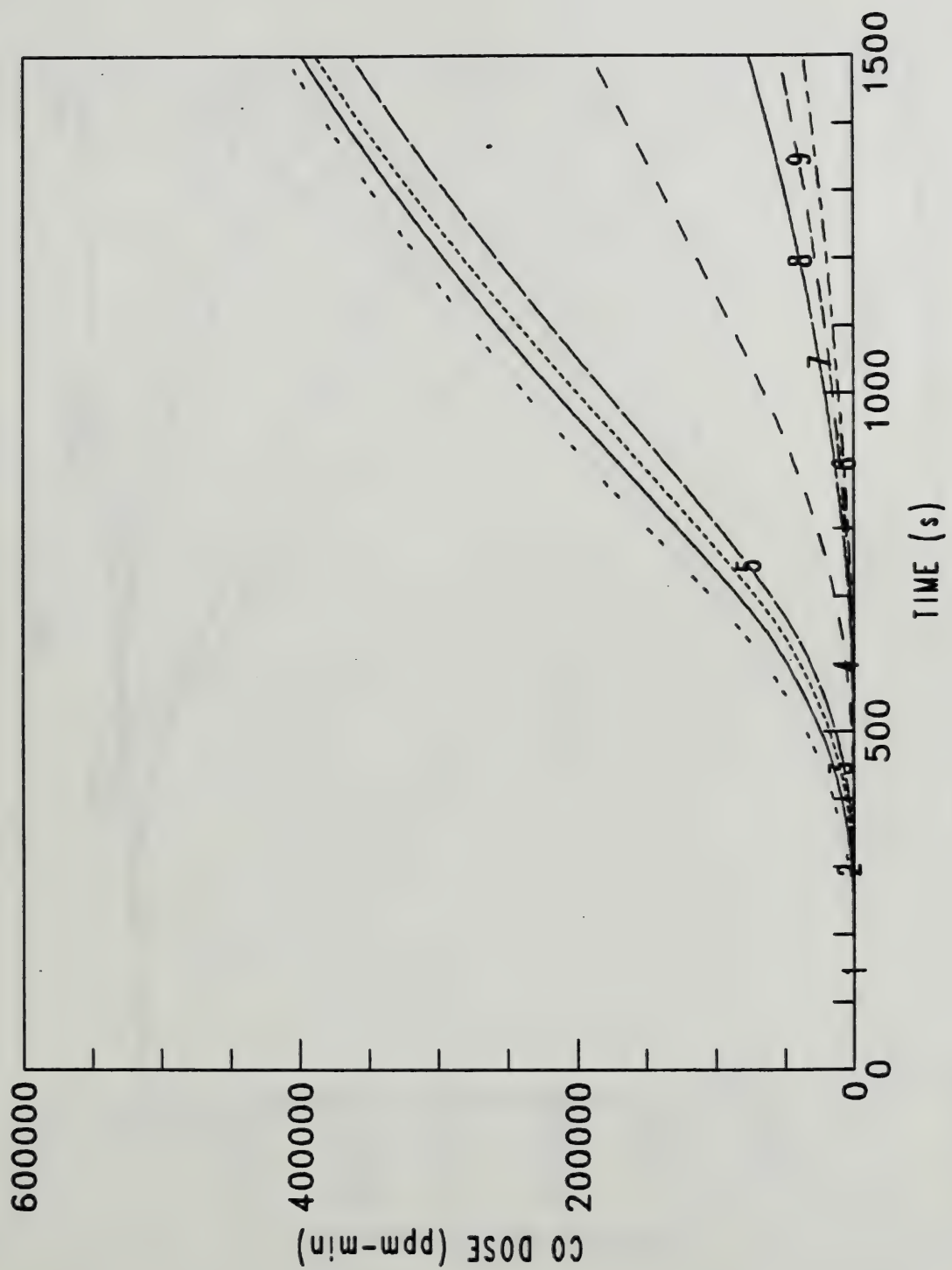


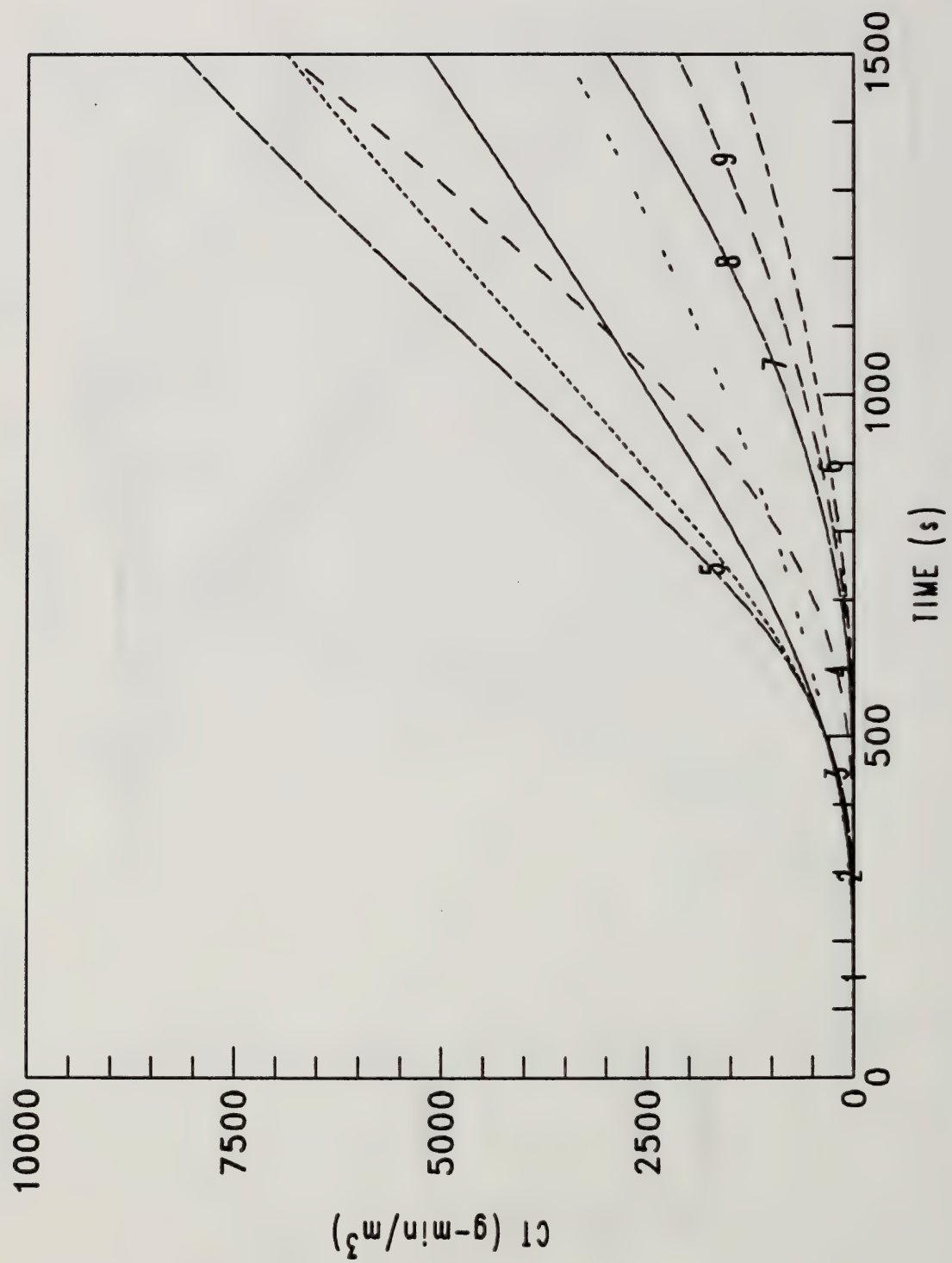




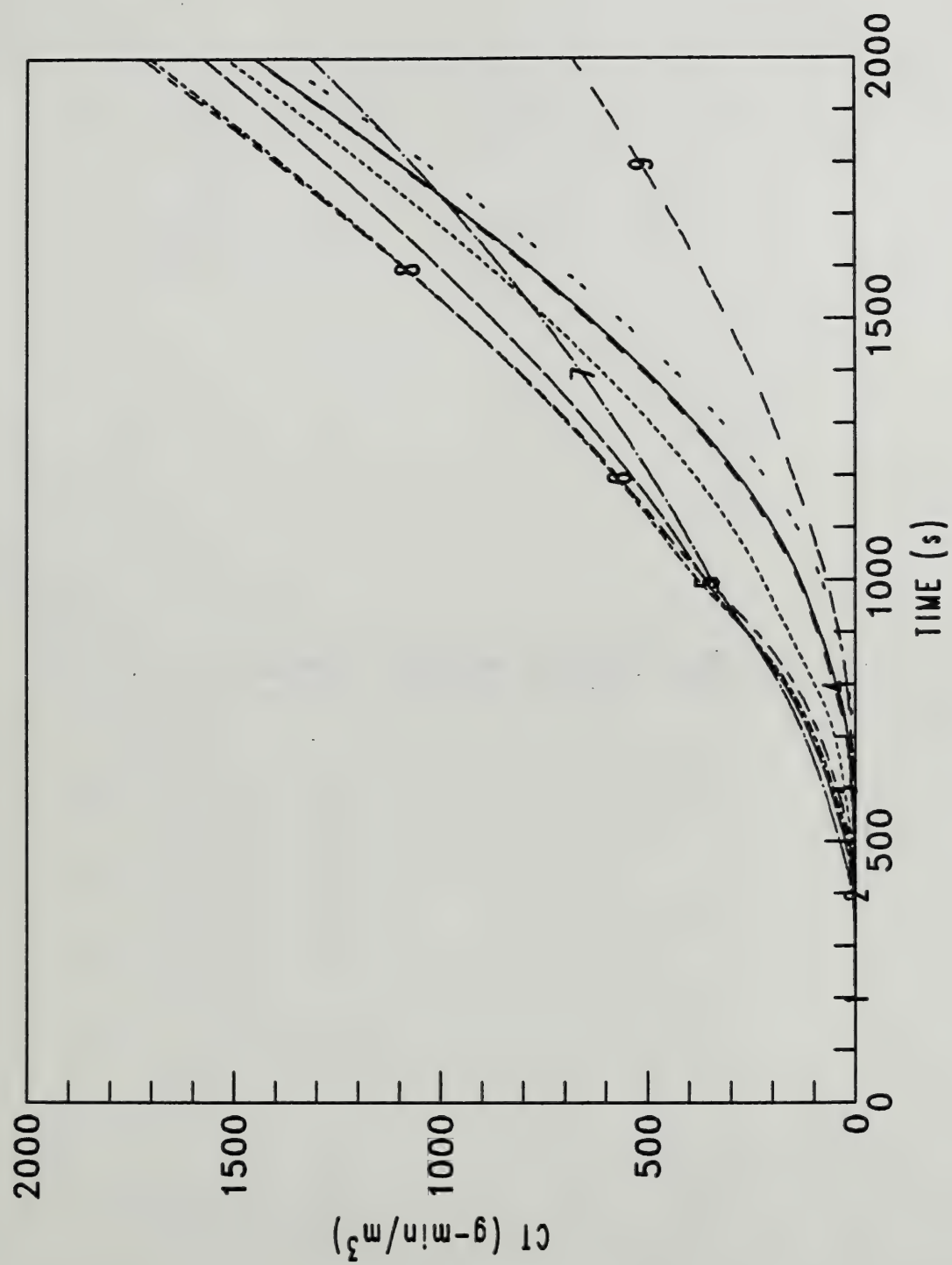














E. OUTPUT - COMPUTER FILES FOR FIRE #7

## TWO STORY HOUSE -PASSAGE

**TOTAL COMPARTMENTS = 9**  
**MAXIMUM OPENINGS PER PAIR = 1**

## FLOOR PLAN

	6.4	4.1	1.0	1.0	5.8	3.2	3.2	3.0
WIDTH	3.6							
DEPTH	4.2	5.8	3.0	9.0	4.0	3.0	3.0	4.8
HEIGHT	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
AREA	15.1	23.8	3.0	9.0	23.2	9.6	9.6	14.4
VOLUME	36.3	57.1	7.2	44.1	55.7	23.0	23.0	34.6
Ceiling	2.4	2.4	2.4	4.9	5.1	5.1	5.1	5.1
FLOOR	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	1.10
	HH=	2.10	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.20
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	2.10	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00	0.00	0.20
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	1.10	0.00	0.00	0.00	0.01	1.10	0.00	0.00	0.00	0.00	0.00
	HL=	2.10	0.00	0.00	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	2.10	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	2.10	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 ( 1 )	BW=	0.00	0.00	1.10	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00
	HH=	0.00	0.00	2.10	0.00	0.00	0.00	0.00	4.80	4.80	4.80	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.70	2.70	2.70	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.80	4.80	4.80	0.00
6 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00
8 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00	0.00

HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
  
BW= 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00  
HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00

9 ( 1)

CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 13

TOTAL TIME INTERVAL = 1500

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 4.00E-03 8.00E-03 3.20E-02 0.16 0.15 0.22 0.24 0.20 0.38 0.12 4.1  
FHIGH= 0.00E+00  
0E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.0  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
4 -1.4



[illegible]

[illegible][illegible]

TIME = 100.0 SECONDS.

U. TEMP	320.3	355.7	305.5	325.7	300.1	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	18.5	34.6	15.9	3.7	6.3	0.0	0.0	0.0	0.0	0.0
UL. THICK	1.2	1.3	0.7	1.2	0.7	0.0	0.0	0.0	0.0	0.0
CE. TEMP	301.6	306.5	300.2	302.1	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	301.1	304.4	300.2	301.4	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.1	300.6	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.2	301.0	300.0	300.1	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	4.282E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	8.856E-03	2.376E-02	2.431E-03	1.362E-02	3.325E-05	5.324E-07	2.829E-07	2.829E-07	4.225E-07	4.225E-07
	1.001E-02	4.129E-02	1.935E-03	7.079E-03	3.991E-06	7.980E-07	5.109E-07	5.109E-07	6.319E-07	6.319E-07
QSCW	1.214E-01	4.158E-01	2.285E-02	1.639E-01	5.735E-05	7.867E-07	5.840E-07	5.840E-07	6.957E-07	6.957E-07
	-2.653E-04	-2.162E-03	-2.283E-05	-1.778E-04	1.380E-08	-9.333E-06	-9.134E-06	-9.134E-06	-9.226E-06	-9.226E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.042E+05	2.010E+05	2.060E+05	2.035E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2 PPM	1.997E+03	4.353E+03	698.	2.551E+03	8.65	3.31	2.84	2.84	2.84	3.12
CO PPM	58.8	128.	20.6	75.2	0.255	9.757E-02	8.371E-02	8.371E-02	8.371E-02	9.183E-02
OD 1/M	0.146	0.287	5.354E-02	0.183	6.749E-04	2.584E-04	2.217E-04	2.217E-04	2.217E-04	2.432E-04
CT GM/M3	1.08	3.01	0.309	1.48	1.308E-03	2.982E-04	2.235E-04	2.235E-04	2.235E-04	2.642E-04



TIME = 200.0 SECONDS.

U. TEMP	422.8	509.5	350.5	336.7	312.8	301.0	301.2	301.2	301.1
L. TEMP	300.3	301.3	300.1	300.1	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	29.4	57.3	45.8	7.0	41.3	19.0	7.0	7.0	10.8
UL. THICK	1.9	2.1	1.9	2.3	4.6	0.8	0.7	0.7	0.7
CE. TEMP	317.5	337.6	305.5	307.0	300.8	300.0	300.0	300.0	300.0
UW. TEMP	312.0	326.3	303.7	304.8	300.5	300.0	300.0	300.0	300.0
LW. TEMP	302.0	306.0	300.6	300.7	300.1	300.0	300.0	300.0	300.0
FL. TEMP	303.3	309.8	301.0	301.2	300.1	300.0	300.0	300.0	300.0
PLUME	0.000E+00	6.188E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	9.091E-02	2.257E-01	2.530E-02	1.744E-02	7.405E-03	5.109E-04	6.137E-04	6.137E-04	5.758E-04
QSCW	1.544E-01	4.455E-01	4.747E-02	4.920E-02	7.416E-03	3.259E-04	2.913E-04	2.913E-04	3.096E-04
	1.040E+00	1.788E+00	3.722E-01	2.183E-01	6.828E-02	2.470E-03	3.105E-03	3.105E-03	2.878E-03
	-1.022E-02	-4.134E-02	-2.171E-03	-2.717E-03	-1.033E-04	-7.646E-06	-6.932E-06	-6.932E-06	-7.287E-06

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.894E+05	1.826E+05	1.982E+05	1.987E+05	2.043E+05	2.068E+05	2.067E+05	2.067E+05	2.067E+05
CO2 PPM	1.272E+04	1.765E+04	6.378E+03	5.672E+03	1.969E+03	176.	208.	208.	197.
CO PPM	375.	520.	188.	167.	58.0	5.18	6.14	6.14	5.79
OD 1/M	0.704	0.811	0.426	0.394	0.147	1.368E-02	1.620E-02	1.620E-02	1.528E-02
CT GM/M3	9.81	15.5	5.02	9.77	0.923	7.995E-02	8.488E-02	8.488E-02	8.279E-02

THE FIRE BECAME VENTILATION CONTROLLED AT 298. SECONDS  
 CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
 SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5

TIME = 300.0 SECONDS.

U. TEMP	759.3	1322.7	517.5	433.1	413.0	325.1	317.5	317.5	321.6
L. TEMP	316.0	438.8	304.7	325.1	301.1	300.3	300.7	300.7	300.5
UL. VOLUM	33.3	63.7	52.7	7.2	43.1	52.5	23.0	23.0	33.8
UL. THICK	2.2	2.4	2.2	2.4	4.8	2.3	2.4	2.4	2.3
CE. TEMP	423.8	699.4	348.2	327.0	320.6	303.5	302.5	302.5	303.1
UW. TEMP	393.4	649.0	334.2	319.0	314.3	302.4	301.7	301.7	302.1
LW. TEMP	339.3	568.8	309.5	305.5	302.5	300.5	300.4	300.4	300.5
FL. TEMP	361.8	709.5	315.3	309.0	304.3	300.9	300.8	300.8	300.9
PLUME	0.000E+00	7.280E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.917E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.402E+00	1.547E+01	2.259E-01	1.152E-01	9.407E-02	9.689E-03	7.446E-03	7.446E-03	8.790E-03
	2.225E+00	1.640E+01	5.334E-01	2.682E-01	1.826E-01	2.893E-02	2.166E-02	2.166E-02	2.623E-02
QSCW	3.371E+00	5.309E+00	1.725E+00	1.029E+00	8.809E-01	1.450E-01	9.044E-02	9.044E-02	1.186E-01
	-3.813E-01	-2.976E+00	-5.609E-02	5.678E-03	-1.117E-02	-1.300E-03	-7.580E-07	-7.580E-07	-7.000E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	7.232E+04	0.000E+00	1.338E+05	1.620E+05	1.637E+05	1.989E+05	2.017E+05	2.017E+05	1.997E+05
CO2	PPM	9.754E+04	1.536E+05	5.297E+04	3.850E+04	3.127E+04	5.878E+03	4.501E+03	4.501E+03	5.294E+03
CO	PPM	2.874E+03	4.526E+03	1.561E+03	1.134E+03	921.	173.	133.	133.	156.
OD	1/M	3.01	2.72	2.40	2.08	1.77	0.423	0.332	0.332	0.385
CT	GM/M3	48.0	53.5	33.5	32.4	19.5	5.45	4.99	4.99	5.45



TIME = 400.0 SECONDS.

U. TEMP	772.8	1481.6	520.9	427.9	415.5	317.6	312.8	312.8	315.3
L. TEMP	387.8	890.6	329.8	1436.0	307.4	301.2	301.5	301.5	301.4
UL. VOLUM	35.8	64.4	56.5	7.2	43.9	53.7	23.0	23.0	34.6
UL. THICK	2.4	2.4	2.4	2.4	4.9	2.3	2.4	2.4	2.4
CE. TEMP	471.4	1095.0	367.3	341.0	331.7	304.1	302.9	302.9	303.6
UW. TEMP	434.9	1044.9	349.4	330.6	322.8	302.9	302.0	302.0	302.5
LW. TEMP	382.5	837.3	320.3	432.8	307.0	300.9	300.9	300.9	300.9
FL. TEMP	427.1	1115.9	333.1	303.3	311.4	301.5	301.2	301.2	301.4
PLUME	0.000E+00	2.467E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.438E+00	2.020E+01	2.033E-01	2.519E-01	8.670E-02	3.968E-03	4.101E-03	4.101E-03	4.242E-03
	2.692E+00	1.480E+01	6.509E-01	-1.046E+00	2.512E-01	2.421E-02	1.740E-02	1.740E-02	2.181E-02
QSCW	2.850E+00	2.470E+00	1.496E+00	7.888E-01	7.668E-01	7.834E-02	5.259E-02	5.259E-02	6.488E-02
	-2.699E-01	-1.513E+00	-1.076E-02	6.845E-01	-1.512E-02	-4.658E-04	2.561E-05	2.561E-05	-4.048E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	5.015E+04	0.000E+00	8.819E+04	1.653E+05	1.119E+05	1.960E+05	1.986E+05	1.986E+05	1.971E+05
CO2 PPM	1.902E+05	3.041E+05	1.198E+05	1.316E+05	8.413E+04	8.174E+03	6.911E+03	6.911E+03	7.695E+03
CO PPM	5.605E+03	8.960E+03	3.529E+03	3.878E+03	2.479E+03	241.	204.	204.	227.
OD 1/M	5.77	4.81	5.39	7.20	4.74	0.603	0.517	0.517	0.571
CT GM/M3	153.	145.	125.	140.	94.9	17.3	14.8	14.8	16.7

TIME = 500.0 SECONDS.

U. TEMP.	912.0	1894.5	535.5	300.0	379.5	340.5	351.5	351.5	346.1
L. TEMP.	356.7	1616.2	313.0	303.9	307.8	314.5	310.4	313.0	313.0
U. VOLUM	27.9	64.2	44.0	0.0	40.9	52.0	23.0	34.0	34.0
U. DEPTH	1.8	2.4	1.9	0.0	4.5	2.2	2.4	2.4	2.4
CE. TEMP	527.4	1623.2	370.8	300.5	317.0	308.3	310.1	308.8	308.8
UW. TEMP	527.4	1623.2	370.8	300.5	317.0	308.3	310.1	309.2	309.2
LW. TEMP	393.1	1066.7	317.4	301.3	303.4	302.6	303.0	302.7	302.7
FL. TEMP	462.5	1638.9	330.2	302.2	306.0	304.5	305.1	304.7	304.7
ENS(I)=	0.000E+00	4.877E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.059E+02	-3.430E+03	-3.088E+01	5.175E-03	-6.533E+00	-2.287E+00	-1.681E+00	-1.681E+00	-1.977E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.164E+02	-7.312E+01	-7.495E+01	1.681E-04	-3.565E+01	-1.210E+01	-9.253E+00	-9.253E+00	-1.072E+01
	1.745E+01	8.226E-01	2.670E+00	-1.103E-01	-7.746E-02	-2.003E-01	-1.434E-02	-1.434E-02	-5.415E-02
Pres(kpa)	1.372E+01	7.872E+00	1.633E+00	1.317E+01	1.783E+01	2.385E+01	2.372E+01	2.372E+01	2.369E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	3.33	6.54	3.57	0.000E+00	1.43	0.801	0.492	0.492	0.627
PPM	1.853E+05	3.281E+05	7.388E+04	0.000E+00	2.255E+04	8.923E+03	1.280E+04	1.280E+04	1.084E+04
CO MASS	6.252E-02	0.123	6.699E-02	0.000E+00	2.684E-02	1.502E-02	9.232E-03	9.232E-03	1.175E-02
PPM	5.461E+03	9.666E+03	2.177E+03	0.000E+00	665.	263.	377.	377.	320.
OD MASS	4.168E-02	8.181E-02	4.466E-02	0.000E+00	1.789E-02	1.001E-02	6.155E-03	6.155E-03	7.834E-03
1/M	5.23	4.46	3.55	0.000E+00	1.53	0.674	0.938	0.938	0.806

U. TEMP.	873.0	2001.1	533.0	300.5	390.5	350.4	362.7	362.7	356.9
L. TEMP.	456.0	1849.0	326.7	303.1	308.2	313.6	307.1	307.1	310.1
U. VOLUM	34.1	64.4	54.8	0.0	43.7	54.8	23.0	23.0	34.5
U. DEPTH	2.3	2.4	2.3	0.0	4.9	2.4	2.4	2.4	2.4
CE. TEMP	552.3	1848.8	377.2	300.4	321.9	311.2	314.0	314.0	312.0
UW. TEMP	552.3	1848.8	377.2	300.4	321.9	311.2	314.0	314.0	312.7
LW. TEMP	429.2	1204.6	324.4	301.0	305.6	303.4	304.1	304.1	303.7
FL. TEMP	523.3	1856.4	342.0	301.5	309.6	305.7	307.0	307.0	306.2
EMS(I)=	0.000E+00	2.580E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.930E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.802E+02	-2.516E+03	-3.250E+01	1.841E-03	-8.116E+00	-3.044E+00	-2.129E+00	-2.129E+00	-2.562E+00
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.0041E+02	-3.218E+01	-7.792E+01	-3.457E-04	-4.202E+01	-1.593E+01	-1.130E+01	-1.130E+01	-1.353E+01
	7.361E+00	4.330E-02	2.109E+00	-8.192E-02	3.228E-02	-7.538E-02	-1.357E-04	-1.357E-04	-1.343E-02
Pres(kpa)	1.261E+01	9.549E+00	1.526E+01	1.239E+01	1.767E+01	2.505E+01	2.527E+01	2.527E+01	2.517E+01

	4.33	7.18	5.53	UPPER LAYER SPECIES CONCENTRATION	0.934	0.934	1.23
C02 MASS							
PPM	1.884E+05	3.792E+05	9.142E+04	0.000E+00	2.43	1.63	2.157E+04
CO MASS	8.110E-02	0.135	0.104	0.000E+00	3.699E+04	1.773E+04	2.299E-02
PPM	5.552E+03	1.117E+04	2.694E+03	0.000E+00	4.565E-02	3.062E-02	736.
OD MASS	5.407E-02	8.971E-02	6.913E-02	0.000E+00	1.090E+03	523.	1.67E-02
I/M	5.55	4.88	4.41	0.000E+00	3.043E-02	2.041E-02	1.77
					2.44	1.30	1.56





**TIME = 800.0 SECONDS.**

U. TEMP.	990.8	2490.7	586.1	324.4	415.9	371.2	385.0	385.0	378.8
L. TEMP.	708.6	2439.1	383.2	306.0	318.8	310.2	312.6	312.6	310.9
U. VOLUME	36.3	64.4	57.0	5.4	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	1.8	4.9	2.4	2.4	2.4	2.4
CE. TEMP	700.0	2438.1	409.8	303.4	334.3	319.2	323.5	323.5	320.4
UW. TEMP	700.0	2438.1	409.8	303.4	334.3	319.2	323.5	323.5	321.7
LW. TEMP	543.2	1590.1	349.6	301.3	311.4	306.0	307.4	307.4	306.5
FL. TEMP	709.8	2440.2	383.8	302.0	319.2	310.0	312.5	312.5	310.9
EMS(I)=	0.000E+00	1.748E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.724E+02	-1.808E+03	-4.872E+01	-3.012E-01	-1.138E+01	-4.660E+00	-3.103E+00	-3.103E+00	-3.832E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-8.538E+01	-6.535E+00	-8.808E+01	-1.677E+00	-5.126E+01	-2.262E+01	-1.487E+01	-1.487E+01	-1.843E+01
	-1.144E-03	-1.458E-01	1.810E-02	-5.941E-02	6.182E-03	-1.091E-03	-1.003E-04	-1.003E-04	8.946E-05
Pres(kpa)	1.797E+01	1.584E+01	2.072E+01	1.929E+01	2.366E+01	3.308E+01	3.236E+01	3.236E+01	3.275E+01

UPPER LAYER SPECIES CONCENTRATION

	CO2	MASS	5.74	7.11	8.63	0.165	4.63	4.01	2.09	2.09	2.86
	PPM		2.667E+05	4.674E+05	1.508E+05	1.666E+04	7.433E+04	4.555E+04	5.929E+04	5.929E+04	5.335E+04
	CO	MASS	0.108	0.133	0.162	3.085E-03	8.689E-02	7.528E-02	3.914E-02	3.914E-02	5.367E-02
	PPM		7.857E+03	1.377E+04	4.443E+03	491.	2.190E+03	1.342E+03	1.747E+03	1.747E+03	1.572E+03
	OD	MASS	7.174E-02	8.892E-02	0.108	2.057E-03	5.792E-02	5.018E-02	2.609E-02	2.609E-02	3.578E-02
	1/M		6.93	4.83	6.62	1.32	4.60	3.16	3.96	3.96	3.62



TIME = 900.0 SECONDS.

U. TEMP.	904.9	2064.5	558.9	323.4	407.7	367.9	380.9	380.9	375.2
L. TEMP.	682.6	2070.7	386.1	302.4	320.8	310.8	314.6	314.6	312.3
U. VOLUM	36.3	64.5	57.0	6.5	44.1	55.6	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.2	4.9	2.4	2.4	2.4	2.4
CE. TEMP	675.1	2023.0	409.2	304.5	335.7	320.8	325.2	325.2	322.0
UW. TEMP	675.1	2023.0	409.2	304.5	335.7	320.8	325.2	325.2	323.5
LW. TEMP	531.7	1388.2	352.2	301.3	312.8	306.8	308.5	308.5	307.5
FL. TEMP	679.2	2023.8	386.4	302.1	321.2	311.2	314.1	314.1	312.3
EMS(I)=	0.000E+00	9.400E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.746E+02	-8.176E+02	-3.783E+01	-3.080E-01	-9.787E+00	-4.215E+00	-2.784E+00	-2.784E+00	-3.467E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-6.590E+01	-5.431E+00	-7.269E+01	-1.657E+00	-4.391E+01	-1.994E+01	-1.306E+01	-1.306E+01	-1.626E+01
	-1.829E-02	-2.814E-01	8.266E-03	-3.393E-03	5.115E-03	1.700E-02	-4.842E-06	-4.842E-06	3.003E-04
Pres(kpa)	1.300E+01	1.042E+01	1.589E+01	1.472E+01	1.872E+01	2.763E+01	2.684E+01	2.684E+01	2.723E+01

UPPER LAYER SPECIES CONCENTRATION

	5.30	6.76	8.29	0.231	4.74	4.34	2.21	2.21	3.07
CO2 MASS	2.250E+05	3.680E+05	1.381E+05	1.969E+04	7.450E+04	4.876E+04	6.223E+04	6.223E+04	5.660E+04
CO MASS	9.945E-02	0.127	0.155	4.337E-03	8.885E-02	8.134E-02	4.152E-02	4.152E-02	5.751E-02
PPM	6.628E+03	1.084E+04	4.069E+03	580.	2.195E+03	1.437E+03	1.834E+03	1.834E+03	1.668E+03
OD MASS	6.630E-02	8.448E-02	0.104	2.891E-03	5.923E-02	5.422E-02	2.768E-02	2.768E-02	3.834E-02
1/M	6.40	4.59	6.36	1.57	4.70	3.41	4.20	4.20	3.88

U. TEMP.	834.6	1717.5	536.3	321.6	400.5	364.3	376.4	376.4	371.1
L. TEMP.	646.5	1735.4	384.3	300.0	321.8	311.7	316.6	316.6	313.0
U. VOLUME	36.3	64.5	57.1	7.1	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	642.0	1688.1	405.5	305.0	335.8	321.3	325.8	325.8	322.4
UW. TEMP	642.0	1688.1	405.5	305.0	335.8	321.3	325.8	325.8	324.1
LW. TEMP	516.6	1228.4	352.4	301.4	313.5	307.4	309.2	309.2	308.1
FL. TEMP	641.5	1687.3	384.4	302.2	322.0	311.9	314.9	314.9	313.1
EMS(1)=	0.000E+00	5.115E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(1)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(1)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(1)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(1)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.193E+02	-3.377E+02	-3.037E+01	-2.909E-01	-8.530E+00	-3.805E+00	-2.497E+00	-2.497E+00	-3.128E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(1)=	-5.484E+01	-3.872E+00	-6.214E+01	-1.515E+00	-3.839E+00	-1.773E+00	-1.158E+01	-1.158E+01	-1.445E+01
	-1.693E-02	-2.698E-01	1.360E-03	2.232E-02	2.910E-03	1.113E-02	2.488E-03	2.488E-03	1.678E-04
Pres(kpa)	8.604E+00	5.964E+00	1.150E+01	1.043E+01	1.426E+01	2.257E+01	2.181E+01	2.181E+01	2.219E+01

	UPPER LAYER SPECIES CONCENTRATION									
CO2	MASS	4.97	6.60	7.91	0.277	4.72	4.49	2.26	2.26	3.16
	PPM	1.946E+05	2.989E+05	1.264E+05	2.127E+04	7.289E+04	4.998E+04	6.281E+04	6.281E+04	5.762E+04
CO	MASS	9.328E-02	0.124	0.148	5.198E-03	8.852E-02	8.422E-02	4.240E-02	4.240E-02	5.918E-02
	PPM	5.733E+03	8.808E+03	3.724E+03	627.	2.148E+03	1.473E+03	1.851E+03	1.851E+03	1.698E+03
OD	MASS	6.219E-02	8.250E-02	9.888E-02	3.465E-03	5.901E-02	5.615E-02	2.826E-02	2.826E-02	3.945E-02
	1/M	6.00	4.48	6.07	1.70	4.68	3.53	4.29	4.29	4.00

TIME = 1100.0 SECONDS.

U. TEMP.	779.6	1443.7	518.8	320.7	394.9	361.1	372.4	372.4	367.5
L. TEMP.	605.9	1427.4	380.1	302.6	321.9	312.1	316.5	316.5	313.3
U. VOLUME	36.3	64.5	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	606.3	1409.9	400.3	305.2	335.1	321.2	325.6	325.6	322.2
UW. TEMP	606.3	1409.9	400.3	305.2	335.1	321.2	325.6	325.6	324.0
LW. TEMP	499.5	1089.5	351.2	301.7	313.9	307.7	309.5	309.5	308.4
FL. TEMP	602.0	1407.9	380.0	302.7	322.1	312.2	315.2	315.2	313.3
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-8.904E+01	-2.325E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-4.992E+01	-5.341E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pres(kpa)	-1.117E-02	-8.367E-02	-9.570E-04	2.742E-04	1.124E-03	4.781E-03	2.067E-03	2.067E-03	6.437E-05
	5.146E+00	2.710E+00	7.845E+00	6.407E+00	1.039E+01	1.823E+01	1.752E+01	1.752E+01	1.789E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	4.72	6.47	7.58	0.306	4.70	4.62	2.29	2.29	3.22
PPM		1.723E+05	2.463E+05	1.172E+05	2.315E+04	7.158E+04	5.090E+04	6.300E+04	6.300E+04	5.824E+04
CO	MASS	8.841E-02	0.121	0.142	5.732E-03	8.815E-02	8.653E-02	4.299E-02	4.299E-02	6.040E-02
PPM		5.076E+03	7.258E+03	3.453E+03	682.	2.109E+03	1.500E+03	1.856E+03	1.856E+03	1.716E+03
OD	MASS	5.894E-02	8.091E-02	9.479E-02	3.821E-03	5.877E-02	5.769E-02	2.866E-02	2.866E-02	4.026E-02
1/M		5.69	4.39	5.81	1.86	4.66	3.63	4.35	4.35	4.08



TIME = 1200.0 SECONDS.

U. TEMP.	738.8	1263.9	506.8	321.0	391.2	359.0	369.5	369.5	365.1
L. TEMP.	570.9	1225.9	375.7	302.8	321.7	312.2	316.0	316.0	313.3
U. VOLUM	36.3	64.5	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	575.2	1214.5	395.3	305.4	334.3	321.0	325.2	325.2	321.9
UW. TEMP	575.2	1214.5	395.3	305.4	334.3	321.0	325.2	325.2	323.7
LW. TEMP	483.9	986.4	349.6	301.9	314.0	307.9	309.7	309.7	308.5
FL. TEMP	568.1	1212.0	375.4	302.9	321.8	312.3	315.2	315.2	313.3
EMS(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-7.179E+01	-2.226E+02	-2.278E+01	-2.754E-01	-7.184E+00	-3.289E+00	-2.118E+00	-2.118E+00	-2.705E+00
QC(I)=	-4.795E+01	-9.777E+00	-5.207E+01	-1.409E+00	-3.283E+01	-1.515E+01	-9.776E+00	-9.776E+00	-1.235E+01
	-6.852E-03	-5.711E-02	-1.076E-03	1.419E-04	4.403E-04	2.331E-03	-1.721E-04	-1.721E-04	2.574E-05
Pres(kpa)	2.589E+00	3.193E-01	5.130E+00	3.589E+00	7.547E+00	1.510E+01	1.441E+01	1.441E+01	1.478E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	4.54	6.46	7.34	0.332	4.71	4.74	2.33	2.33	3.29
PPM		1.571E+05	2.151E+05	1.109E+05	2.520E+04	7.101E+04	5.200E+04	6.342E+04	6.342E+04	5.904E+04
CO	MASS	8.511E-02	0.121	0.138	6.233E-03	8.826E-02	8.895E-02	4.361E-02	4.361E-02	6.163E-02
PPM		4.630E+03	6.337E+03	3.267E+03	742.	2.092E+03	1.532E+03	1.869E+03	1.869E+03	1.740E+03
OD	MASS	5.674E-02	8.069E-02	9.179E-02	4.155E-03	5.884E-02	5.930E-02	2.908E-02	2.908E-02	4.109E-02
1/M		5.47	4.38	5.63	2.02	4.67	3.73	4.42	4.42	4.16

TIME = 1300.0 SECONDS.

U. TEMP.	707.1	1125.9	498.4	321.9	389.1	357.6	367.6	367.6	363.6
L. TEMP.	540.9	1094.2	371.3	303.1	321.3	312.1	315.5	315.5	313.1
U. VOLUM	36.3	64.4	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	548.3	1060.6	390.7	305.7	333.6	320.7	324.7	324.7	321.4
UW. TEMP	548.3	1060.6	390.7	305.7	333.6	324.7	324.7	324.7	323.4
LW. TEMP	469.4	897.8	347.9	302.0	314.0	308.0	309.8	309.8	308.6
FL. TEMP	539.0	1057.5	371.0	303.1	321.4	312.2	315.0	315.0	313.1
EMS(I)=	0.000E+00	3.778E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-6.095E+01	-2.020E+02	-2.106E+01	-2.888E-01	-6.920E+00	-3.180E+00	-2.030E+00	-2.030E+00	-2.612E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.755E+01	-1.545E+01	-5.020E+01	-1.487E+00	-3.186E+01	-1.465E+01	-9.392E+00	-9.392E+00	-1.193E+01
	-4.198E-03	-2.356E-01	-8.780E-04	6.834E-05	1.265E-04	9.163E-04	2.376E-04	2.376E-04	1.193E-05
Pres(kpa)	9.378E-01	-1.106E+00	3.292E+00	1.629E+00	5.567E+00	1.294E+01	1.230E+01	1.230E+01	1.265E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	4.45	6.53	7.19	0.359	4.74	4.88	2.36	2.36	3.36
	PPM	1.473E+05	1.940E+05	1.068E+05	2.727E+04	7.103E+04	5.331E+04	6.412E+04	6.412E+04	6.006E+04
CO	MASS	8.335E-02	0.122	0.135	6.726E-03	8.879E-02	9.153E-02	4.432E-02	4.432E-02	6.297E-02
	PPM	4.339E+03	5.716E+03	3.146E+03	804.	2.093E+03	1.571E+03	1.889E+03	1.889E+03	1.770E+03
OD	MASS	5.557E-02	8.162E-02	8.988E-02	4.484E-03	5.919E-02	6.102E-02	2.955E-02	2.955E-02	4.198E-02
	1/M	5.36	4.43	5.51	2.18	4.70	3.84	4.49	4.49	4.25



**TIME = 1400.0 SECONDS.**

U. TEMP.	676.4	1008.8	490.9	323.2	387.3	356.8	366.5	366.5	362.5
L. TEMP.	514.8	1001.7	367.3	303.3	320.9	312.0	315.3	315.3	312.9
U. VOLUM	36.3	64.2	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	524.6	933.3	386.7	306.0	332.9	320.4	324.3	324.3	321.0
UW. TEMP	524.6	933.3	386.7	306.0	332.9	320.4	324.3	324.3	323.1
LW. TEMP	455.6	818.1	346.2	302.2	314.0	308.0	309.8	309.8	308.6
FL. TEMP	513.4	929.3	367.1	303.3	321.0	312.1	314.7	314.7	312.9
EMS(I)=	0.000E+00	5.607E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-5.116E+01	-1.638E+02	-1.960E+01	-3.072E-01	-6.723E+00	-3.120E+00	-1.984E+00	-1.984E+00	-2.556E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-4.623E+01	-2.029E+01	-4.850E+01	-1.595E+00	-3.116E+01	-1.440E+01	-9.212E+00	-9.212E+00	-1.168E+01
	-2.778E-03	-6.589E-01	-5.635E-04	4.057E-05	4.252E-05	5.432E-04	7.010E-05	7.010E-05	5.895E-06
Pres(kpa)	-2.454E-01	-2.114E+00	1.963E+00	3.159E-01	4.154E+00	1.140E+01	1.078E+01	1.078E+01	1.113E+01

UPPER LAYER SPECIES CONCENTRATION

	4.40	6.58	7.10	0.385	4.78	5.02	2.40	2.40	3.43
CO2 MASS									
PPM	1.396E+05	1.756E+05	1.038E+05	2.935E+04	7.132E+04	5.472E+04	6.497E+04	6.497E+04	6.119E+04
CO MASS	8.257E-02	0.123	0.133	7.212E-03	8.955E-02	9.415E-02	4.504E-02	4.504E-02	6.433E-02
PPM	4.112E+03	5.175E+03	3.059E+03	865.	2.102E+03	1.612E+03	1.914E+03	1.914E+03	1.803E+03
OD MASS	5.505E-02	8.233E-02	8.876E-02	4.808E-03	5.970E-02	6.277E-02	3.003E-02	3.003E-02	4.289E-02
1/M	5.31	4.48	5.44	2.34	4.74	3.95	4.56	4.56	4.34

TIME = 1500.0 SECONDS.

U. TEMP.	641.1	900.2	480.5	323.9	384.5	355.7	365.1	365.1	361.1
L. TEMP.	489.8	927.8	363.3	303.5	320.4	311.9	315.3	315.3	312.7
U. VOLUM	36.3	63.9	57.1	7.2	44.1	55.7	23.0	23.0	34.6
U. DEPTH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4
CE. TEMP	501.6	823.8	382.4	306.3	332.0	320.1	323.9	323.9	320.6
LW. TEMP	501.6	823.8	382.4	306.3	332.0	320.1	323.9	323.9	322.7
LW. TEMP	441.3	744.8	344.2	302.3	313.8	308.0	309.8	309.8	308.6
FL. TEMP	488.7	818.3	363.1	303.5	320.4	311.9	314.5	314.5	312.7
EMS(I)=	0.000E+00	5.131E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-4.054E+01	-1.162E+02	-1.758E+01	-3.154E-01	-6.378E+00	-3.026E+00	-1.923E+00	-1.923E+00	-2.474E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.279E+01	-2.232E+01	-4.542E+01	-1.639E+00	-2.978E+01	-1.397E+01	-8.953E+00	-8.953E+00	-1.131E+01
	-1.939E-03	-1.290E+00	-3.815E-04	3.055E-04	2.977E-05	4.515E-04	9.013E-04	9.013E-04	5.309E-06
Pres(kpa)	-1.593E+00	-3.333E+00	4.857E-01	-1.025E+00	2.597E+00	9.637E+00	9.029E+00	9.029E+00	9.374E+00

UPPER LAYER SPECIES CONCENTRATION

C02 MASS	4.37	6.58	7.03	0.408	4.80	5.14	2.43	2.43	3.49
PPM	1.313E+05	1.576E+05	1.006E+05	3.120E+04	7.120E+04	5.578E+04	6.546E+04	6.546E+04	6.196E+04
CO MASS	8.199E-02	0.123	0.132	7.648E-03	9.006E-02	9.631E-02	4.556E-02	4.556E-02	6.540E-02
PPM	3.870E+03	4.642E+03	2.964E+03	919.	2.098E+03	1.644E+03	1.929E+03	1.929E+03	1.826E+03
OD MASS	5.466E-02	8.228E-02	8.785E-02	5.099E-03	6.004E-02	6.420E-02	3.037E-02	3.037E-02	4.360E-02
1/M	5.27	4.50	5.39	2.48	4.76	4.04	4.61	4.61	4.42

EXECUTION TIME = 302.24

INPUT FAST FILE : SYS:TWOA.DMP/G  
INPUT EXITT FILE : SCENSEV.EVA  
TENABS OUTPUT FILE: SCENSEV.TEN

OCCUPANT	1	ROOM NUMBER	ENTER TIME (S)
		6	0
		5	156
		5	160
		3	161
		10	162

OCCUPANT	2	ROOM NUMBER	ENTER TIME (S)
		6	0
		5	156
		5	160
		3	161
		10	162

OCCUPANT	3	ROOM NUMBER	ENTER TIME (S)
		9	0
		5	161
		5	165
		3	169
		10	170

OCCUPANT	4	ROOM NUMBER	ENTER TIME (S)
		8	0
		5	150
		9	153
		5	159
		5	163
		3	164
		10	165

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 2							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 3

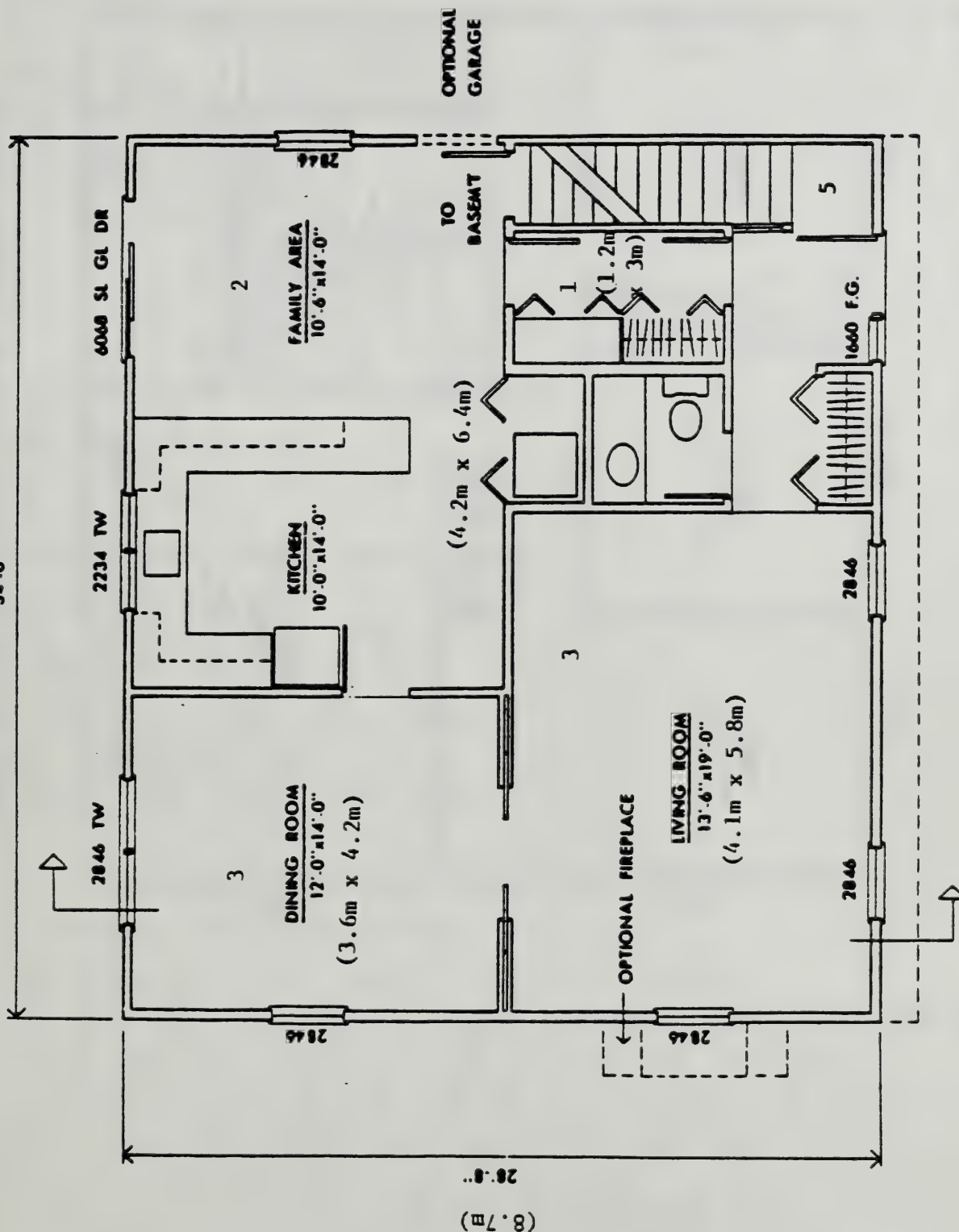
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.

## PERSON 4

TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
3.	OUT	ESCAPE		27.0	0.0	0.00	0.
25.	OUT	FINAL TIME		27.0	0.0	0.00	0.



(10.4m)  
34'-0"



G.1 - Floor Plan for FIRE #7  
(5 Compartments)

# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

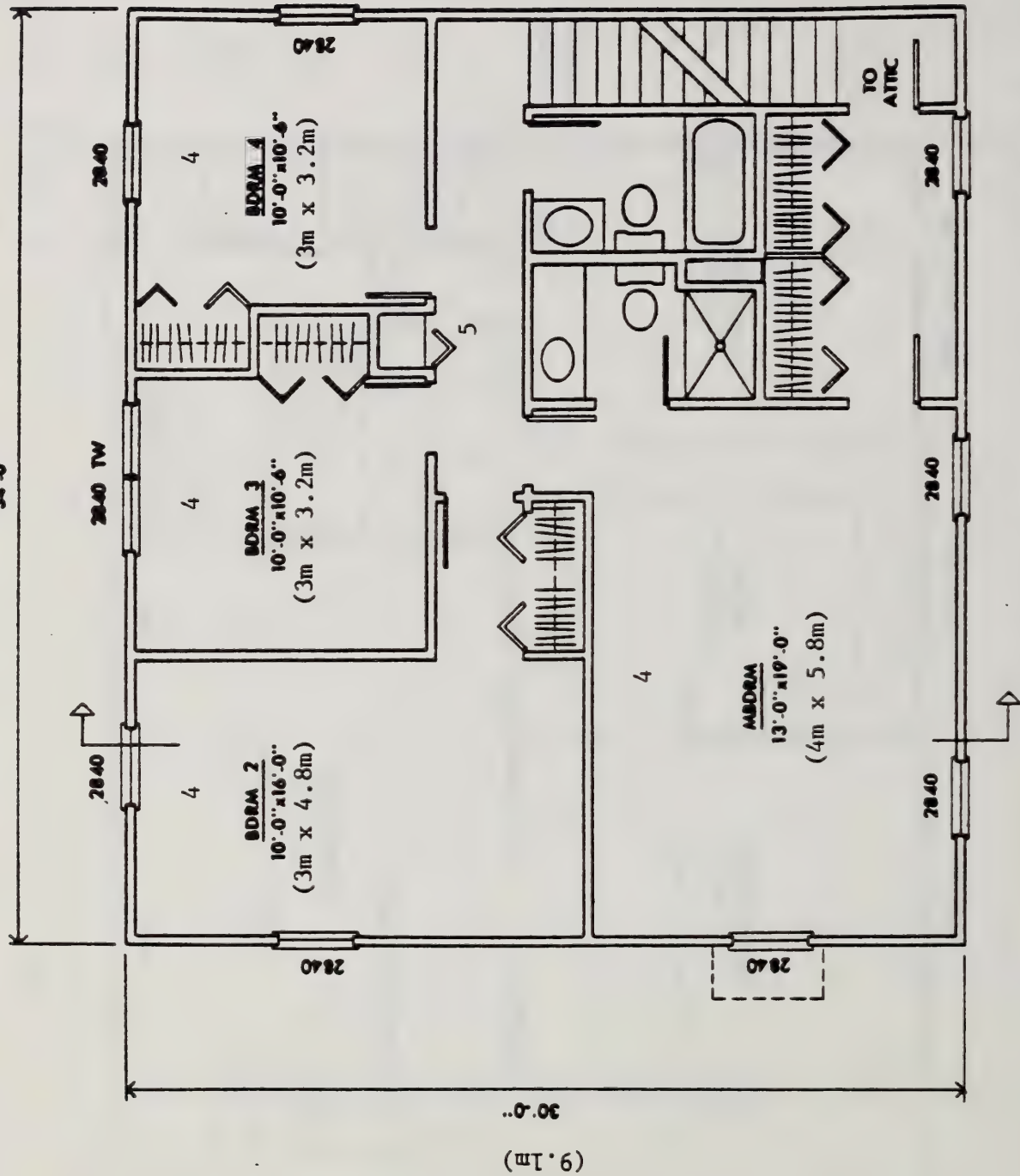


AUG. 10, 1977

P.05



(10.4m)  
34'-0"



G.2 - Floor Plan for FIRE #7  
(5 Compartments)

UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG.10.1977



NBS

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VERSN 017 TWO STORY HOUSE -PASSAGE
TIMES 1500 100 0 0 0 0
NROOM 5
NMXOP 1
TAMB 300
HI/F 0.0 0.0 0.0 2.7 0.0
WIDTH 1.0 6.4 5.8 6.0 1.0
DEPTH 3.0 4.2 6.7 9.5 9.0
HEIGH 2.4 2.4 2.4 2.4 4.9
HVENT 1 2 1.1 .02 0.0
HVENT 1 3 1.1 .02 0.0
HVENT 2 3 1.1 2.1 0.0
HVENT 3 5 1.1 2.1 0.
HVENT 4 5 .04 2.1 0.0
HVENT 2 6 1.1 .02 0.0
CEILI
COND .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790
THICK .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9
WALLS
COND .00018 .00018 .00018 .00018 .00018
SPHT .9 .9 .9 .9 .9
DNSTY 790 790 790 790 790
THICK .016 .016 .016 .016 .016
EMISS .9 .9 .9 .9 .9
FLOOR
COND .0001 .0001 .0001 .0001 .0001
SPHT 1.4 1.4 1.4 1.4 1.4
DNSTY 300 300 300 300 300
THICK .0127 .0127 .0127 .0127 .0127
EMISS 1.0 1.0 1.0 1.0 1.0
LFBO 2
LFBT 1
LFPOS 1
CHEMI 1.0 0.0 0.0 0.0 0.0 18100 300
LFMAX 13
FTIME 100 50 65 75 110 30 50 120 40 40 150 180 490
FMASS 0.0 .004 .008 .032 .162 .153 .224 .245 .199 .376 .376 .122 .041 0.0
FHIGH 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
CO .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03 .03
O2 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1
CO2 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6
OD .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02 .02
CT 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.

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H - INPUT FOR FAST (5 COMPARTMENTS)



**I. OUTPUT COMPUTER FILES FOR FIRE #7**

## TWO STORY HOUSE -PASSAGE

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	1.0	6.4	5.8	6.0	1.0
DEPTH	3.0	4.2	6.7	9.5	9.0
HEIGHT	2.4	2.4	2.4	2.4	4.9
AREA	3.0	26.9	38.9	57.0	9.0
VOLUME	7.2	64.5	93.3	136.8	44.1
CEILING	2.4	2.4	2.4	5.1	4.9
FLOOR	0.0	0.0	0.0	2.7	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	1.10	1.10	0.00	0.00	0.00
	HH=	0.00	0.02	0.02	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.02	0.02	0.00	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	1.10	0.00	1.10	0.00	0.00	1.10
	HH=	0.02	0.00	2.10	0.00	0.00	0.02
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	0.00	2.10	0.00	0.00	0.02
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
3 ( 1 )	BW=	1.10	1.10	0.00	0.00	1.10	0.00
	HH=	0.02	2.10	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.02	2.10	0.00	0.00	2.10	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.04	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00
5 ( 1 )	BW=	0.00	0.00	1.10	0.04	0.00	0.00
	HH=	0.00	0.00	2.10	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	2.10	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	2.70	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
FLOOR					
COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02



[illegible]

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	300.0	356.6	316.1	300.2	300.7
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	33.7	36.8	1.0	19.3
UL. THICK	0.0	1.3	0.9	0.0	2.1
CE. TEMP	300.0	306.6	301.1	300.0	300.0
UW. TEMP	300.0	304.4	300.7	300.0	300.0
LW. TEMP	300.0	300.6	300.1	300.0	300.0
FL. TEMP	300.0	301.0	300.2	300.0	300.0
PLUME	0.000E+00	4.528E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	7.240E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	2.822E-08	2.422E-02	6.491E-03	8.267E-05	4.246E-04
	-2.773E-09	4.130E-02	8.314E-03	5.250E-05	8.060E-05
QSCW	4.690E-10	4.242E-01	9.136E-02	2.306E-04	1.671E-03
	3.639E-08	-2.190E-03	-1.883E-04	-8.787E-06	2.608E-08

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.010E+05	2.048E+05	2.070E+05	2.069E+05
CO2	PPM	/	0.000E+00	4.368E+03	1.592E+03	46.1	84.4
CO	PPM	/	0.000E+00	129.	46.9	1.36	2.49
OD	1/M	/	0.000E+00	0.287	0.118	3.599E-03	6.568E-03
CT	GM/M3	/	0.000E+00	3.02	0.844	1.208E-02	2.229E-02

TIME = 200.0 SECONDS.

U. TEMP	300.0	523.2	377.8	303.6	327.2
L. TEMP	300.0	301.2	300.3	300.0	300.0
UL. VOLUM	0.0	51.6	77.2	71.5	42.0
UL. THICK	0.0	1.9	2.0	1.3	4.7
CE. TEMP	300.0	339.2	310.5	300.1	302.3
UW. TEMP	300.0	327.4	307.1	300.1	301.5
LW. TEMP	300.0	305.8	301.3	300.0	300.2
FL. TEMP	300.0	309.6	302.2	300.0	300.4
PLUME	0.000E+00	8.619E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.646E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.790E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	4.536E-07	2.550E-01	3.956E-02	1.699E-03	1.637E-02
	-5.493E-08	4.338E-01	9.451E-02	1.782E-03	2.023E-02
QSCW	9.329E-09	1.928E+00	6.107E-01	1.301E-02	1.760E-01
	8.146E-07	-4.068E-02	-5.720E-03	-2.077E-05	-5.291E-04

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.816E+05	1.954E+05	2.063E+05	2.020E+05
CO2	PPM	0.000E+00	1.835E+04	8.362E+03	537.	3.631E+03
CO	PPM	0.000E+00	541.	246.	15.8	107.
OD	1/M	0.000E+00	0.821	0.518	4.141E-02	0.260
CT	GM/M3	0.000E+00	15.5	7.57	0.240	2.12

THE FIRE BECAME VENTILATION CONTROLLED AT 280. SECONDS  
 CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
 SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 300.0 SECONDS.

U.TEMP	338.3	1372.3	655.3	325.3	470.3
L.TEMP	308.4	751.6	339.4	301.0	310.4
UL.VOLUM	7.2	64.5	93.3	136.8	44.1
UL.THICK	2.4	2.4	2.4	2.4	4.9
CE.TEMP	303.8	761.4	376.6	303.4	331.0
UW.TEMP	302.5	710.7	355.8	302.3	321.8
LW.TEMP	300.7	605.8	323.7	300.6	306.2
FL.TEMP	300.9	807.3	339.9	301.0	310.5
PLUME	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.612E-01	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	2.917E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	2.325E-02	1.880E+01	7.557E-01	9.100E-03	1.933E-01
	4.545E-02	1.513E+01	1.381E+00	3.111E-02	3.789E-01
QSCW	2.667E-01	5.009E+00	2.911E+00	1.480E-01	1.414E+00
	3.782E-04	4.915E-05	-5.876E-06	-1.150E-06	8.688E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.981E+05	0.000E+00	1.150E+05	2.054E+05	1.566E+05
CO2 PPM	9.330E+03	2.165E+05	8.429E+04	5.454E+03	4.621E+04
CO PPM	275.	6.379E+03	2.484E+03	161.	1.362E+03
OD 1/M	0.646	3.69	3.01	0.393	2.30
CT GM/M3	3.79	61.1	40.0	5.38	24.8



TIME = 400.0 SECONDS.

U. TEMP	362.5	1488.7	707.4	324.0	504.2
L. TEMP	337.3	1126.3	401.0	302.0	328.2
UL. VOLUM	7.2	64.5	93.2	136.8	44.1
UL. THICK	2.4	2.4	2.4	2.4	4.9
CE. TEMP	312.5	1132.7	432.0	305.1	358.1
UW. TEMP	308.7	1085.3	401.1	303.5	342.6
LW. TEMP	303.5	831.9	359.8	301.2	317.0
FL. TEMP	304.4	1155.6	397.6	302.0	328.4
PLUME	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.530E-01	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.769E+03	0.000E+00	0.000E+00	0.000E+00
QSRW	3.625E-02	1.998E+01	9.717E-01	5.256E-03	2.466E-01
	1.006E-01	1.282E+01	1.868E+00	3.362E-02	5.674E-01
QSCW	4.182E-01	2.194E+00	2.689E+00	1.215E-01	1.431E+00
	1.425E-02	-2.702E-02	7.358E-04	-7.275E-07	-1.713E-05

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.624E+05	0.000E+00	5.105E+04	2.103E+05	7.676E+04
CO2 PPM	5.340E+04	3.505E+05	2.191E+05	1.167E+04	1.657E+05
CO PPM	1.573E+03	1.033E+04	6.456E+03	344.	4.882E+03
OD 1/M	3.45	5.51	7.25	0.843	7.69
CT GM/M3	48.8	175.	165.	19.6	143.

TIME = 500.0 SECONDS.

U. TEMP.	327.4	1751.1	712.5	347.7	503.9
L. TEMP.	307.9	1479.2	412.6	326.4	333.6
U. VOLUM	5.4	64.5	93.2	30.6	44.1
U. DEPTH	1.8	2.4	2.4	0.5	4.9
CE. TEMP	303.8	1473.3	436.7	312.5	353.8
UW. TEMP	303.8	1473.3	436.7	312.5	353.8
LW. TEMP	301.0	986.6	365.7	303.9	318.9
FL. TEMP	301.7	1489.7	414.0	306.8	332.8
EMS(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.373E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	4.296E+03	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-3.438E-01	-2.712E+03	-1.722E+02	-3.954E+00	-3.181E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.945E+00	-8.006E+01	-2.032E+02	-1.798E+01	-1.035E+02
	-9.985E-02	4.068E-01	1.125E-01	-5.866E+00	-1.895E-05
Pres(kpo)	2.107E+01	2.000E+01	2.296E+01	4.051E+01	2.501E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	7.078E-02	5.52	7.86	0.999	3.28
	PPM	7.263E+03	2.550E+05	1.021E+05	1.931E+04	6.377E+04
CO	MASS	1.327E-03	0.104	0.147	1.874E-02	6.154E-02
	PPM	214.	7.515E+03	3.009E+03	569.	1.879E+03
OD	MASS	8.848E-04	6.904E-02	9.827E-02	1.249E-02	4.103E-02
	1/M	0.571	3.75	3.69	1.43	3.26

TIME = 600.0 SECONDS.

U. TEMP.	331.9	1850.8	749.7	352.5	523.9
L. TEMP.	308.1	1680.0	454.3	327.7	347.5
U. VOLUM	6.1	64.5	93.3	32.1	44.1
U. DEPTH	2.0	2.4	2.4	0.6	4.9
CE. TEMP	305.8	1677.3	471.0	314.8	366.9
UW. TEMP	305.8	1677.3	471.0	314.8	366.9
LW. TEMP	301.5	1113.6	390.4	304.8	326.0
FL. TEMP	302.5	1686.1	455.0	308.1	344.6
EMS(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.990E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.602E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.278E-01	-2.208E+03	-2.071E+02	-4.424E+00	-3.730E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.404E+00	-4.057E+01	-1.982E+02	-1.969E+01	-1.069E+02
	-6.002E-02	1.215E-01	4.242E-02	-5.924E+00	3.975E-03
Pres(kpa)	2.198E+01	1.983E+01	2.277E+01	4.318E+01	2.488E+01

UPPER LAYER SPECIES CONCENTRATION

C02 MASS	0.103	5.69	8.68	1.25	3.77
PPM	9.545E+03	2.777E+05	1.187E+05	2.340E+04	7.623E+04
C0 MASS	1.937E-03	0.107	0.163	2.352E-02	7.076E-02
PPM	281.	8.182E+03	3.496E+03	690.	2.246E+03
OD MASS	1.291E-03	7.111E-02	0.109	1.568E-02	4.717E-02
1/M	0.740	3.86	4.07	1.71	3.74

TIME = 700.0 SECONDS.

U. TEMP.	349.0	2494.8	852.1	360.6	567.5
L. TEMP.	314.3	2375.3	516.7	329.7	361.5
U. VOLUM	6.6	64.5	93.3	34.1	44.1
U. DEPTH	2.2	2.4	2.4	0.6	4.9
CE. TEMP	309.2	2374.2	523.1	317.4	383.1
UW. TEMP	309.2	2374.2	523.1	317.4	383.1
LW. TEMP	302.3	1527.5	427.9	305.7	335.2
FL. TEMP	303.9	2380.1	517.3	309.4	359.7
EMS(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.421E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.193E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-7.656E-01	-4.033E+03	-3.495E+02	-5.370E+00	-5.349E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.396E+00	-2.014E+01	-2.268E+02	-2.354E+01	-1.259E+02
	-7.121E-02	7.191E-02	2.524E-02	-6.151E+00	2.650E-03
Pres(kpa)	3.207E+01	3.130E+01	3.393E+01	4.685E+01	3.596E+01

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	0.166	6.14	10.2	1.66	4.67
	PPM	1.478E+04	4.035E+05	1.590E+05	2.981E+04	1.021E+05
CO	MASS	3.105E-03	0.115	0.192	3.110E-02	8.754E-02
	PPM	435.	1.189E+04	4.685E+03	878.	3.010E+03
OD	MASS	2.070E-03	7.670E-02	0.128	2.073E-02	5.836E-02
	1/M	1.09	4.16	4.80	2.13	4.63

TIME = 800.0 SECONDS.

U. TEMP.	344.6	2335.8	863.4	368.3	581.2
L. TEMP.	310.4	2298.3	563.4	331.5	375.6
U. VOLUM	7.1	64.5	93.3	36.0	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	311.2	2271.0	564.1	320.5	397.1
LW. TEMP	311.2	2271.0	564.1	320.5	397.1
LW. TEMP	303.2	1495.6	457.5	306.6	344.4
FL. TEMP	305.3	2273.6	563.9	310.9	374.3
EMS(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.728E-01	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.128E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-6.660E-01	-1.825E+03	-3.503E+02	-6.306E+00	-5.811E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-3.659E+00	-9.084E+00	-1.962E+02	-2.685E+01	-1.234E+02
	-1.197E-02	-1.682E-01	1.891E-02	-6.318E+00	-4.215E-04
Pres(kpa)	2.763E+01	2.458E+01	2.750E+01	5.055E+01	2.966E+01

UPPER LAYER SPECIES CONCENTRATION

CO2 MASS	0.194	5.96	10.9	2.15	5.12
PPM	1.612E+04	3.674E+05	1.713E+05	3.729E+04	1.147E+05
CO MASS	3.641E-03	0.112	0.204	4.024E-02	9.601E-02
PPM	475.	1.083E+04	5.049E+03	1.099E+03	3.381E+03
OD MASS	2.427E-03	7.455E-02	0.136	2.683E-02	6.401E-02
1/M	1.20	4.05	5.11	2.60	5.08



TIME = 900.0 SECONDS.

U. TEMP.	332.0	1934.3	826.4	365.4	573.0
L. TEMP.	305.5	1905.4	569.9	331.1	384.9
U. VOLUM	7.2	64.5	93.2	36.1	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	310.5	1886.7	571.8	322.0	403.7
UW. TEMP	310.5	1886.7	571.8	322.0	403.7
LW. TEMP	303.4	1306.0	464.8	307.3	349.9
FL. TEMP	305.6	1887.7	570.4	311.9	382.3
EMS(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	9.050E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.638E+03	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-4.129E-01	-7.675E+02	-2.774E+02	-5.753E+00	-5.291E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.119E+00	-6.851E+00	-1.617E+02	-2.369E+01	-1.109E+02
	3.625E-04	-6.673E-02	1.575E-02	-5.907E+00	3.363E-03
Pres(kpa)	1.668E+01	1.381E+01	1.664E+01	5.043E+01	1.885E+01

UPPER LAYER SPECIES CONCENTRATION

	0.189	5.58	10.9	2.28	5.27
CO2 MASS	1.483E+04	2.846E+05	1.637E+05	3.919E+04	1.164E+05
CO MASS	3.547E-03	0.105	0.204	4.271E-02	9.880E-02
PPM	437.	8.387E+03	4.824E+03	1.155E+03	3.430E+03
OD MASS	2.365E-03	6.979E-02	0.136	2.847E-02	6.587E-02
1/M	1.15	3.79	5.10	2.76	5.23

TIME = 1000.0 SECONDS.

U. TEMP.	324.0	1621.7	787.0	358.3	555.9
L. TEMP.	305.3	1593.5	561.3	328.9	386.9
U. VOLUM	7.2	64.5	93.2	34.8	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	309.3	1585.2	565.1	321.6	404.8
UW. TEMP	309.3	1585.2	565.1	321.6	404.8
LW. TEMP	303.3	1161.2	463.6	307.6	352.3
FL. TEMP	305.3	1584.5	561.3	312.0	384.5
EMS(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	4.550E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	8.235E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.724E-01	-3.512E+02	-2.177E+02	-4.740E+00	-4.475E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.298E+00	-5.426E+00	-1.385E+02	-1.904E+01	-9.683E+01
	9.799E-06	-2.700E-02	-3.480E-03	-5.197E+00	3.176E-03
Pres(kpa)	9.053E+00	6.247E+00	9.002E+00	4.752E+01	1.125E+01

UPPER LAYER SPECIES CONCENTRATION

	0.186	5.47	10.8	2.17	5.32
CO2 MASS	1.425E+04	2.339E+05	1.550E+05	3.797E+04	1.140E+05
CO PPM	3.491E-03	0.103	0.203	4.069E-02	9.971E-02
PPM	420.	6.893E+03	4.567E+03	1.119E+03	3.358E+03
OD MASS	2.328E-03	6.842E-02	0.135	2.713E-02	6.647E-02
1/M	1.13	3.71	5.07	2.73	5.28

TIME = 1100.0 SECONDS.

U. TEMP.	319.3	1389.0	749.7	351.8	539.4
L. TEMP.	304.8	1348.9	545.5	326.5	384.2
U. VOLUM	7.2	64.5	93.3	33.2	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	308.0	1343.0	550.7	320.4	402.6
UW. TEMP	308.0	1343.0	550.7	320.4	402.6
LW. TEMP	303.1	1040.8	457.7	307.5	352.6
FL. TEMP	304.8	1341.4	544.2	311.6	382.9
EMS(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	3.475E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	6.289E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.029E-01	-2.761E+02	-1.736E+02	-3.933E+00	-3.807E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-9.155E-01	-8.298E+00	-1.235E+02	-1.551E+01	-8.627E+01
	7.330E-05	-2.311E-02	-7.398E-03	-4.533E+00	-3.783E-04
Pres(kpo)	3.480E+00	1.169E+00	3.648E+00	4.420E+01	5.847E+00

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	0.188	5.52	10.8	2.03	5.32
	PPM	1.420E+04	2.022E+05	1.471E+05	3.652E+04	1.106E+05
CO	MASS	3.532E-03	0.104	0.202	3.805E-02	9.969E-02
	PPM	418.	5.959E+03	4.334E+03	1.076E+03	3.257E+03
OD	MASS	2.354E-03	6.905E-02	0.135	2.537E-02	6.646E-02
	1/M	1.14	3.75	5.05	2.67	5.27

TIME = 1200.0 SECONDS.

U. TEMP.	319.3	1237.6	722.1	346.1	528.4
L. TEMP.	304.4	1204.4	527.8	324.2	381.3
U. VOLUM	7.2	64.5	93.3	31.7	44.1
U. DEPTH	2.4	2.4	2.4	0.6	4.9
CE. TEMP	307.2	1172.5	535.6	318.9	399.6
UW. TEMP	307.2	1172.5	535.6	318.9	399.6
LW. TEMP	302.9	951.1	450.8	307.2	352.1
FL. TEMP	304.4	1170.6	526.8	311.0	380.2
EMS(I)=	0.000E+00	4.029E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.780E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	5.031E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.152E-01	-2.684E+02	-1.475E+02	-3.297E+00	-3.422E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.003E+00	-1.438E+01	-1.162E+02	-1.281E+01	-8.059E+01
	3.390E-05	-2.048E-01	-4.820E-03	-3.961E+00	-2.328E-04
Pres(kpa)	7.691E-01	-9.760E-01	1.260E+00	4.098E+01	3.377E+00

UPPER LAYER SPECIES CONCENTRATION

CO2	MASS	0.201	5.71	10.8	1.89	5.36
	PPM	1.516E+04	1.863E+05	1.428E+05	3.515E+04	1.092E+05
CO	MASS	3.771E-03	0.107	0.203	3.545E-02	0.101
	PPM	447.	5.488E+03	4.208E+03	1.036E+03	3.219E+03
OD	MASS	2.514E-03	7.132E-02	0.136	2.363E-02	6.704E-02
	1/M	1.22	3.87	5.09	2.61	5.32

TIME = 1300.0 SECONDS.

U. TEMP.	321.4	1115.5	697.5	341.0	520.0
L. TEMP.	304.2	1101.0	510.7	322.1	378.7
U. VOLUM	7.2	64.3	93.3	30.2	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	1035.4	520.6	317.3	396.5
UW. TEMP	306.9	1035.4	520.6	317.3	396.5
LW. TEMP	302.8	872.3	443.5	306.9	351.3
FL. TEMP	304.2	1033.1	510.0	310.1	377.2
EMS(I)=	0.000E+00	6.181E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	2.085E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	3.773E+02	0.000E+00	0.000E+00	0.000E+00
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QR(I)=	-2.576E-01	-2.346E+02	-1.272E+02	-2.788E+00	-3.160E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-1.265E+00	-2.045E+01	-1.108E+02	-1.069E+01	-7.698E+01
	1.580E-05	-5.668E-01	-2.400E-03	-3.488E+00	2.032E-03
Pres(kpa)	-4.777E-01	-1.941E+00	1.109E-01	3.808E+01	2.137E+00

# UPPER LAYER SPECIES CONCENTRATION

C02	MASS	0.219	5.90	11.0	1.77	5.44
	PPM	1.663E+04	1.738E+05	1.400E+05	3.394E+04	1.090E+05
CO	MASS	4.110E-03	0.111	0.206	3.311E-02	0.102
	PPM	490.	5.121E+03	4.124E+03	1000.	3.212E+03
OD	MASS	2.740E-03	7.369E-02	0.138	2.207E-02	6.797E-02
	1/M	1.33	4.01	5.16	2.56	5.39



TIME = 1400.0 SECONDS.

U. TEMP.	322.9	1006.5	671.4	336.5	511.1
L. TEMP.	304.1	1017.7	493.4	320.2	375.3
U. VOLUM	7.2	64.1	93.3	28.8	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	918.3	505.3	315.6	393.1
UW. TEMP	306.9	918.3	505.3	315.6	393.1
LW. TEMP	302.8	799.3	435.1	306.4	350.1
FL. TEMP	304.1	915.0	493.0	309.2	373.9
EMS(I)=	0.000E+00	7.056E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	1.390E-02	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	2.516E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QC(I)=	-2.867E-01	-1.855E+02	-1.078E+02	-2.376E+00	-2.897E+01
	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.445E+00	-2.507E+01	-1.045E+02	-8.996E+00	-7.320E+01
	1.139E-05	-1.091E+00	-1.202E-03	-3.094E+00	-4.746E-04
Pres(kpa)	-1.691E+00	-3.074E+00	-1.173E+00	3.548E+01	7.596E-01

UPPER LAYER SPECIES CONCENTRATION

	0.237	6.03	11.1	1.65	5.50
CO2 MASS	1.805E+04	1.609E+05	1.364E+05	3.289E+04	1.084E+05
PPM	4.439E-03	0.113	0.209	3.102E-02	0.103
CO MASS	532.	4.742E+03	4.020E+03	969.	3.194E+03
PPM	2.960E-03	7.537E-02	0.139	2.068E-02	6.877E-02
OD MASS	1.44	4.11	5.23	2.52	5.46
1/M					

TIME = 1500.0 SECONDS.

U. TEMP.	323.3	906.1	643.8	332.3	500.8
L. TEMP.	304.0	948.9	475.9	318.4	372.6
U. VOLUM	7.2	63.7	93.3	27.4	44.1
U. DEPTH	2.4	2.4	2.4	0.5	4.9
CE. TEMP	306.9	816.4	489.4	314.0	389.2
UW. TEMP	306.9	816.4	489.4	314.0	389.2
LW. TEMP	302.8	731.5	425.9	306.0	348.4
FL. TEMP	304.1	811.7	475.7	308.4	370.2
EMS(I)=	0.000E+00	6.196E-02	0.000E+00	0.000E+00	0.000E+00
EMP(I)=	0.000E+00	6.949E-03	0.000E+00	0.000E+00	0.000E+00
APS(I)=	0.00	0.00	0.00	0.00	0.00
QF(I)=	0.000E+00	1.258E+02	0.000E+00	0.000E+00	0.000E+00
QR(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-2.951E-01	-1.353E+02	-8.968E+01	-2.023E+00	-2.609E+01
QC(I)=	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
	-1.496E+00	-2.754E+01	-9.742E+01	-7.545E+00	-6.876E+01
	6.919E-06	-1.864E+00	-6.106E-04	-2.748E+00	3.123E-03
Pres(kpa)	-3.216E+00	-4.524E+00	-2.784E+00	3.306E+01	-9.437E-01

UPPER LAYER SPECIES CONCENTRATION

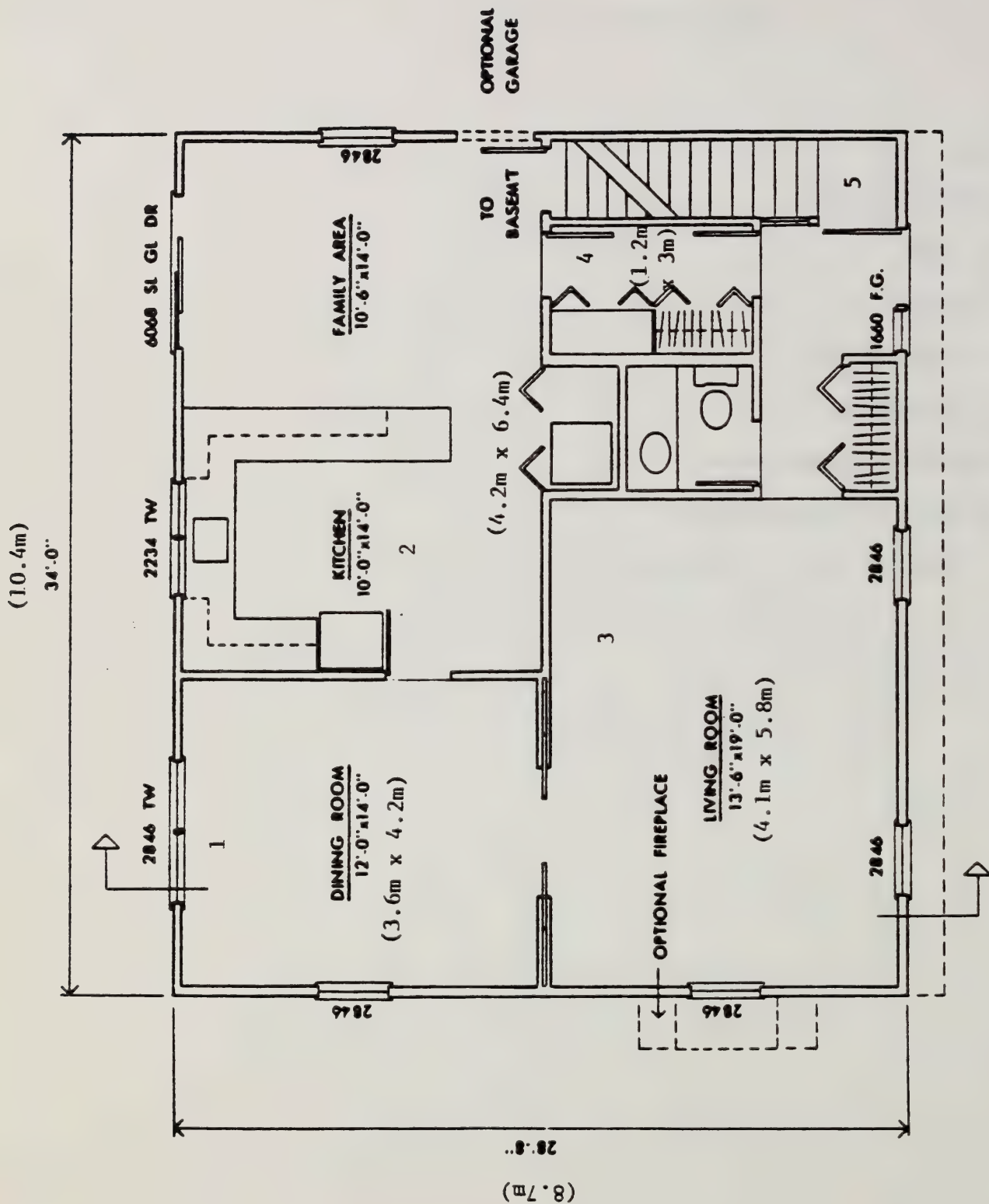
CO2 MASS	0.252	6.12	11.3	1.55	5.54
PPM	1.925E+04	1.480E+05	1.321E+05	3.194E+04	1.070E+05
CO MASS	4.726E-03	0.115	0.211	2.910E-02	0.104
PPM	567.	4.360E+03	3.891E+03	941.	3.153E+03
OD MASS	3.151E-03	7.649E-02	0.141	1.940E-02	6.928E-02
1/M	1.53	4.20	5.28	2.47	5.50
EXECUTION TIME =		167.81			



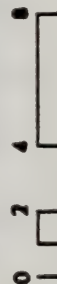
FIRE #8

TRASH, DRAPES AND DESK

- A. Floor Plan
- B. Fuel Loads Background
- C. Input for FAST
- D. Output - Graphs
- E. Output - Computer File
- F. Output - Evacuation
- G. Floor Plan for 5 Compartments
- H. Input for FAST (5 Compartments)
- I. Output - Computer File (5 Compartments)



# LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE



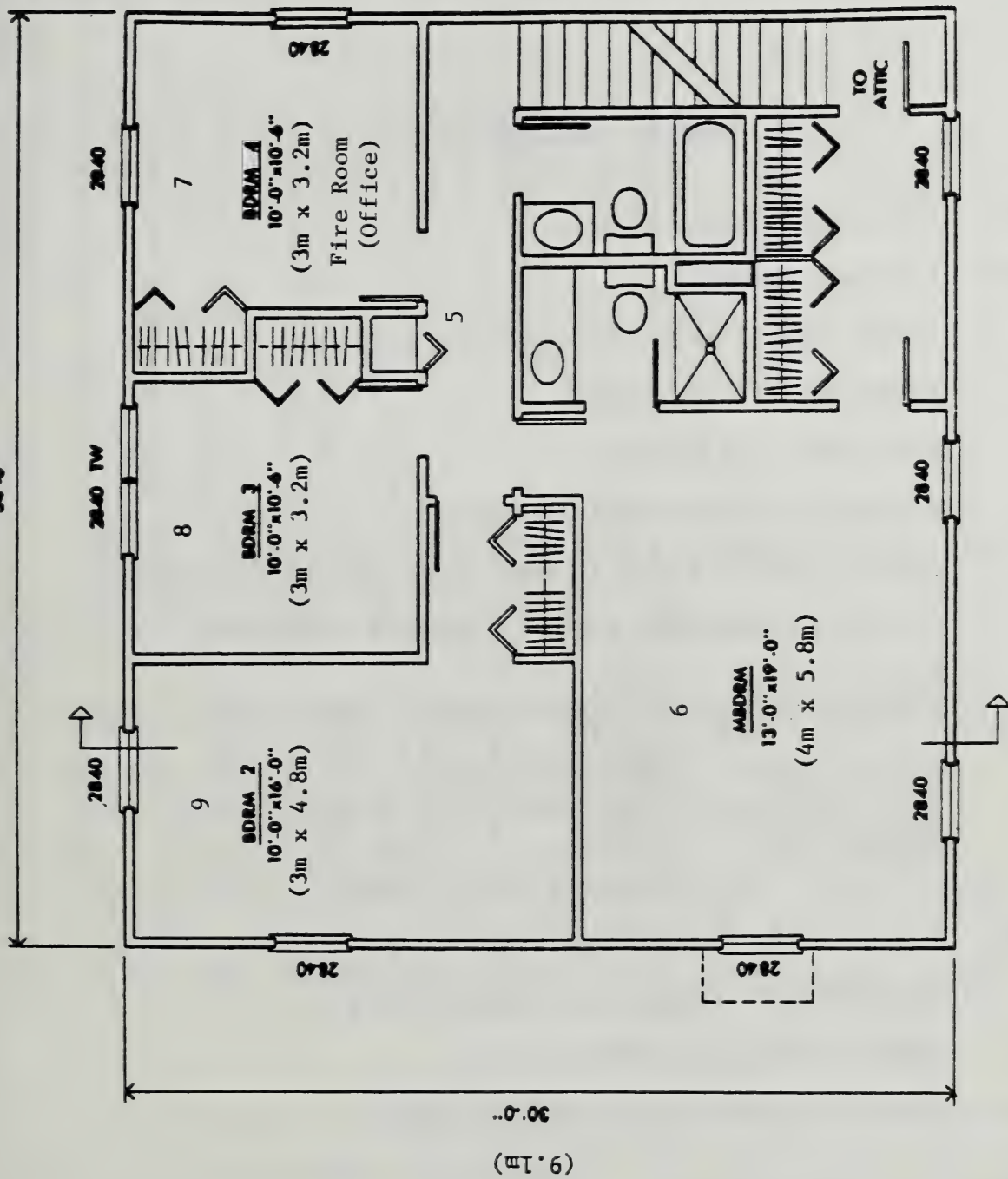
AUG. 10, 1977

NBS

A.1 - Floor Plan for FIRE #8



(10.4m)  
34'-0"



A.2 - Floor Plan for FIRE #8

# UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

AUG. 10, 1977

NBS

## B. FUEL BACKGROUND FOR FIRE #8

### FIRE 8 - OFFICE/BEDROOM FIRE

BUILDING: Two story detached house

OCCUPANTS: All fully capable.

Father aged 45 asleep on couch in family room.

Mother aged 40 in kitchen.

Girl aged 14 in kitchen.

Boy aged 16 in bedroom 2 listening to loud stereo.

FIRE: Fire in trash can next to desk, exposing drapes on window.

DOORS: All doors open except door to bedroom 2 is closed.

FUEL:       Material Code:     WPB001  
          Material ID:     Wastepaper basket, polyethelene, milk cartons,  
                              exp. 7  
          Material Code:     CTN001  
          Material ID:     Curtain, cotton, 0.31 kg/m2, item 9  
          Material Code:     TLV001  
          Material ID:     Television set, B/W, wood cabinet (fuel load  
                              increased to  $\approx$  30 kg)

CEILINGS: Gypsum board, standard, see NBSIR 85-3223

WALLS: Gypsum board, standard, see NBSIR 85-3223

FLOORS: Carpet and pad, see NBSIR 85-3223

FIRE ROOM: Office (bedroom #4 is used as an office)

TIME TO

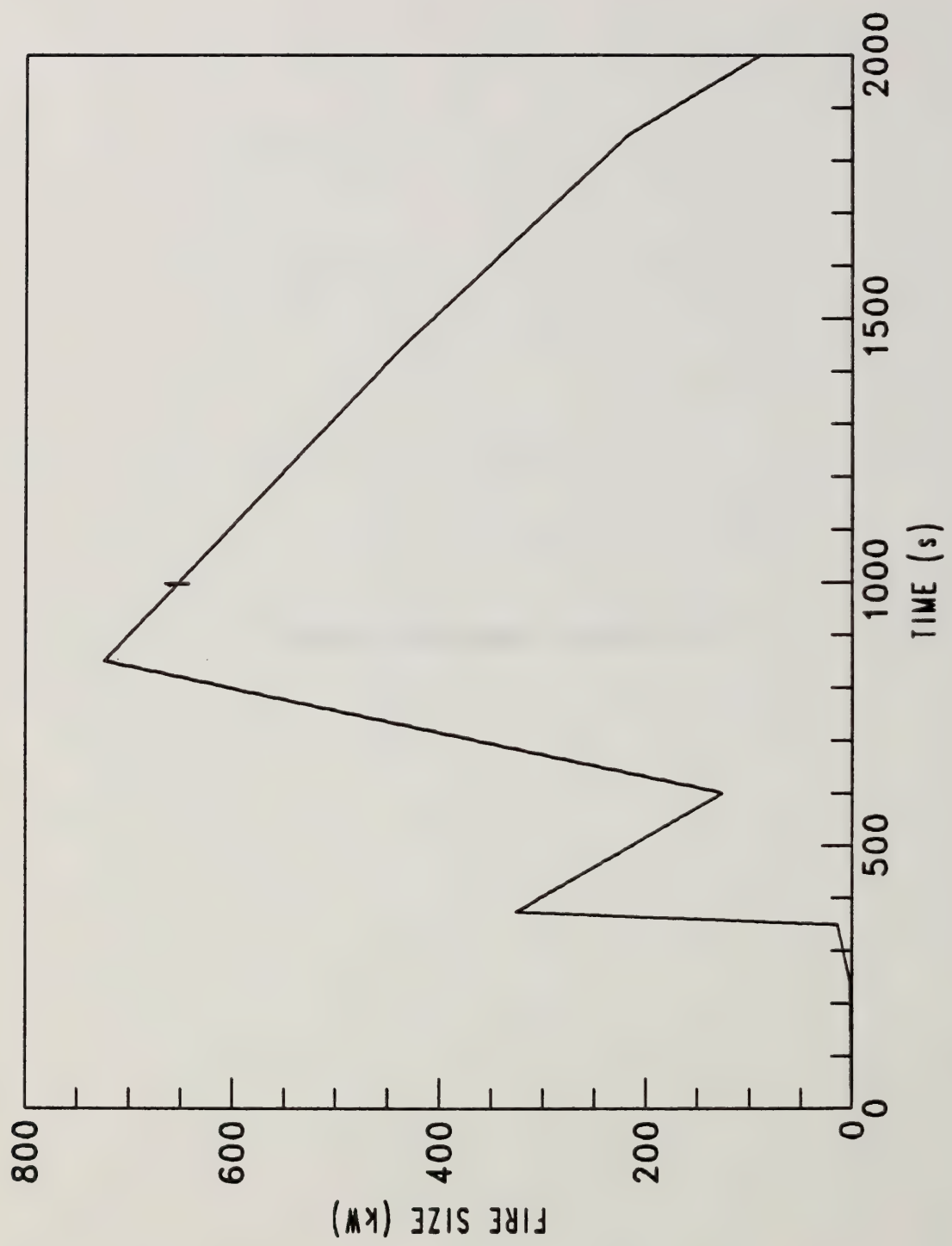
FLASHOVER: 15 minutes

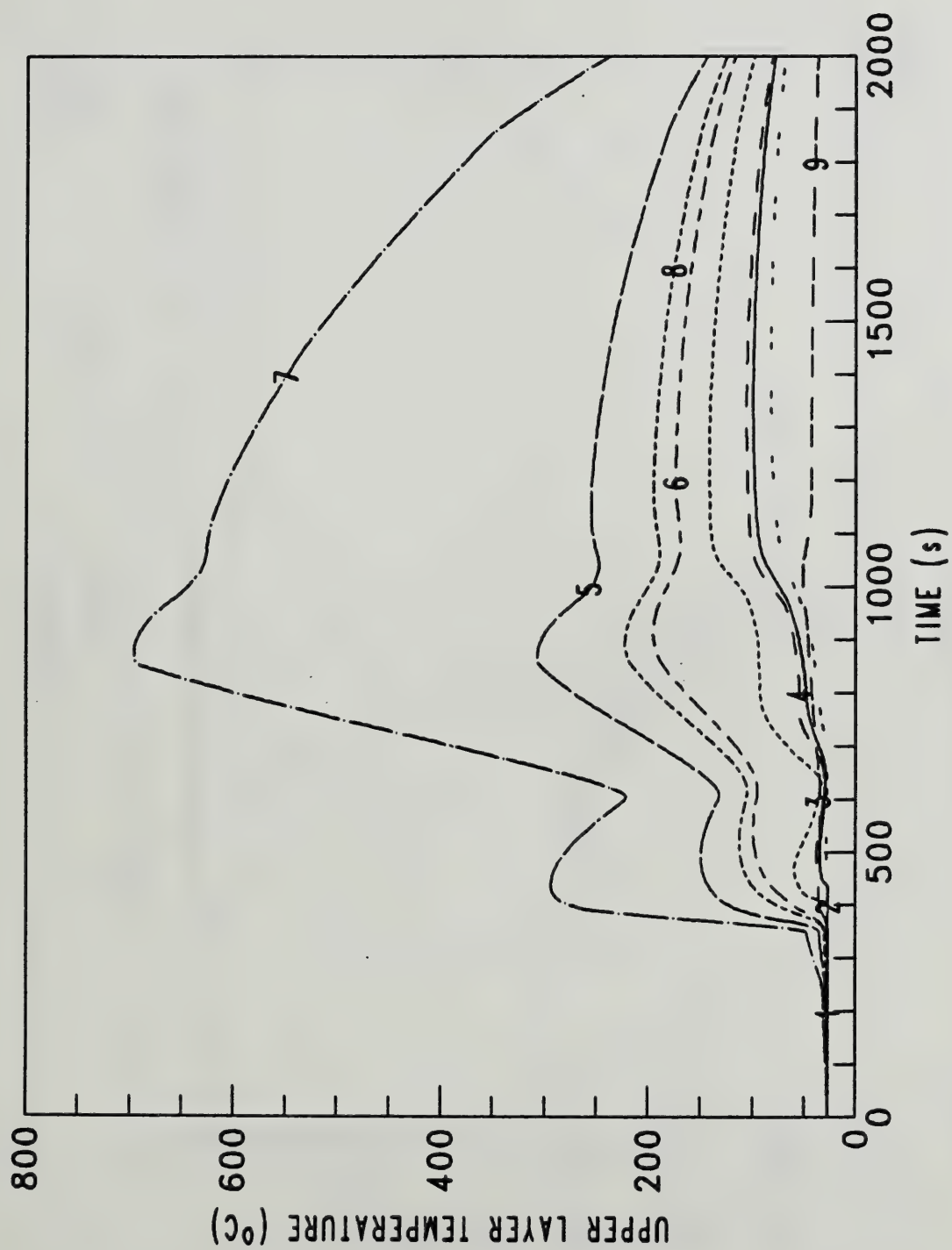
VERSN	17 TWO STORY BUILDING ,OFFICE									
TIMES	2000 100 0 0 0 0									
NROOM	9									
NMXOP	1									
TAMB	300									
HI/F	0.0	0.0	0.0	0.0	0.0	2.7	2.7	2.7	2.7	
WIDTH	3.6	6.4	4.1	1.0	1.0	5.8	3.2	3.2	3.0	
DEPTH	4.2	4.2	5.8	3.0	9.0	4.0	3.0	3.0	4.8	
HEIGH	2.4	2.4	2.4	2.4	4.9	2.4	2.4	2.4	2.4	
HVENT	1	2	1.1	2.1	0.0					
HVENT	1	3	1.1	2.1	0.0					
HVENT	2	4	1.1	2.10	0.0					
HVENT	3	4	1.1	2.10	0.					
HVENT	3	5	1.1	2.1	0.0					
HVENT	5	6	.01	4.8	2.7					
HVENT	5	7	1.1	4.8	2.7					
HVENT	5	8	1.1	4.8	2.7					
HVENT	2	10	1.1	0.2	0.0					
HVENT	5	9	0.01	4.8	2.7					
CEILI										
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9	
DNSTY	790	790	790	790	790	790	790	790	790	
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9	
WALLS										
COND	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	.00018	
SPHT	.9	.9	.9	.9	.9	.9	.9	.9	.9	
DNSTY	790	790	790	790	790	790	790	790	790	
THICK	.016	.016	.016	.016	.016	.016	.016	.016	.016	
EMISS	.9	.9	.9	.9	.9	.9	.9	.9	.9	
FLOOR										
COND	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	
SPHT	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
DNSTY	300	300	300	300	300	300	300	300	300	
THICK	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	.0127	
EMISS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
LFBO	7									
LFBT	1									
LFPOS	1									
CHEMI	1.0	0.0	0.0	0.0	0.0	18100	300			
LFMAX	8									
FTIME	240	110	25	225	250	600	400	150		
FMASS	0.0	.0001	.0008	.018	.007	.04	.024	.012	.005	
FHIGH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
CO	.03	.03	.03	.03	.03	.03	.03	.03	.03	
O2	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4	
CO2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
OD	.02	.02	.02	.02	.02	.02	.02	.02	.02	
CT	1.	1.	1.	1.	1.	1.	1.	1.	1.	

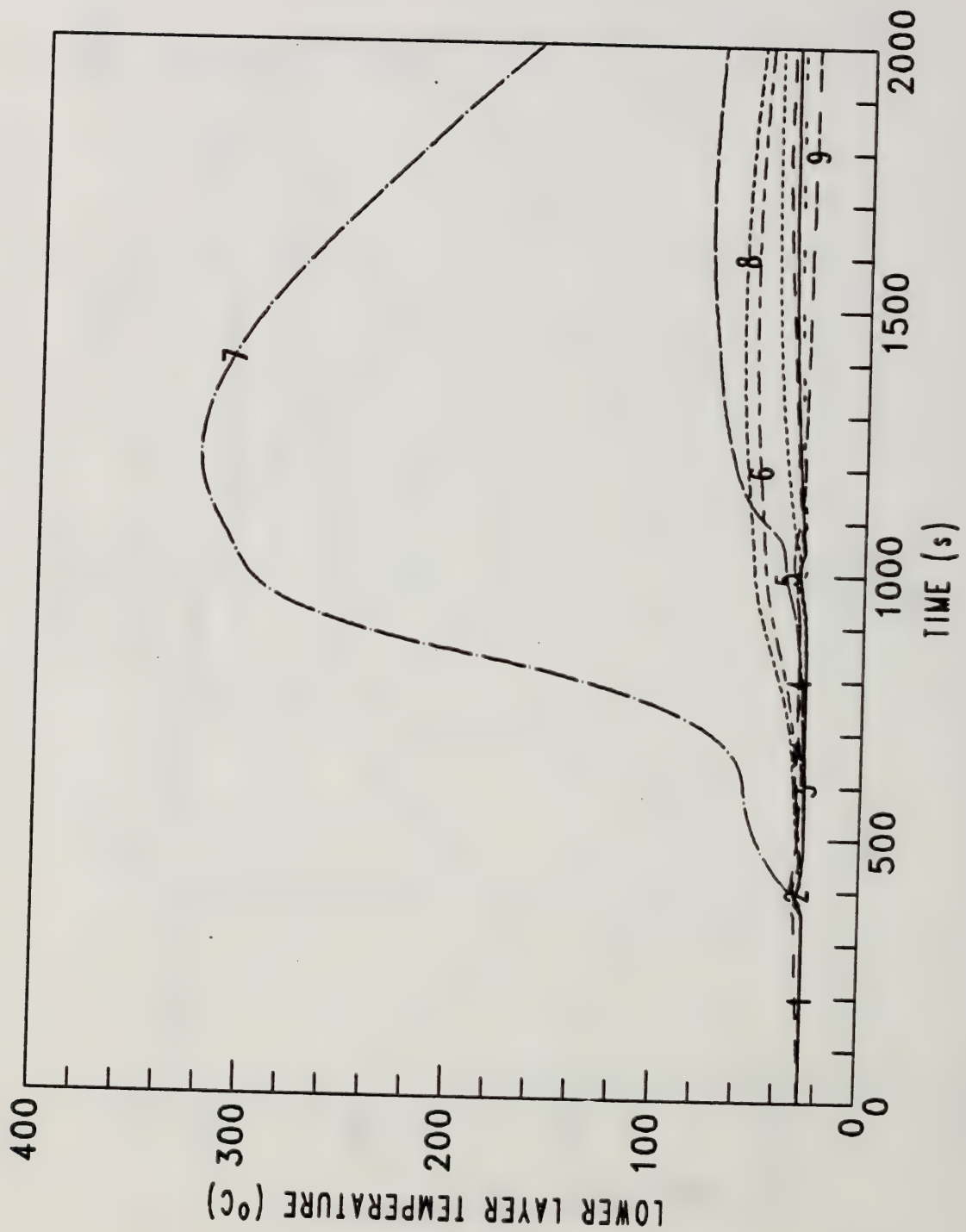


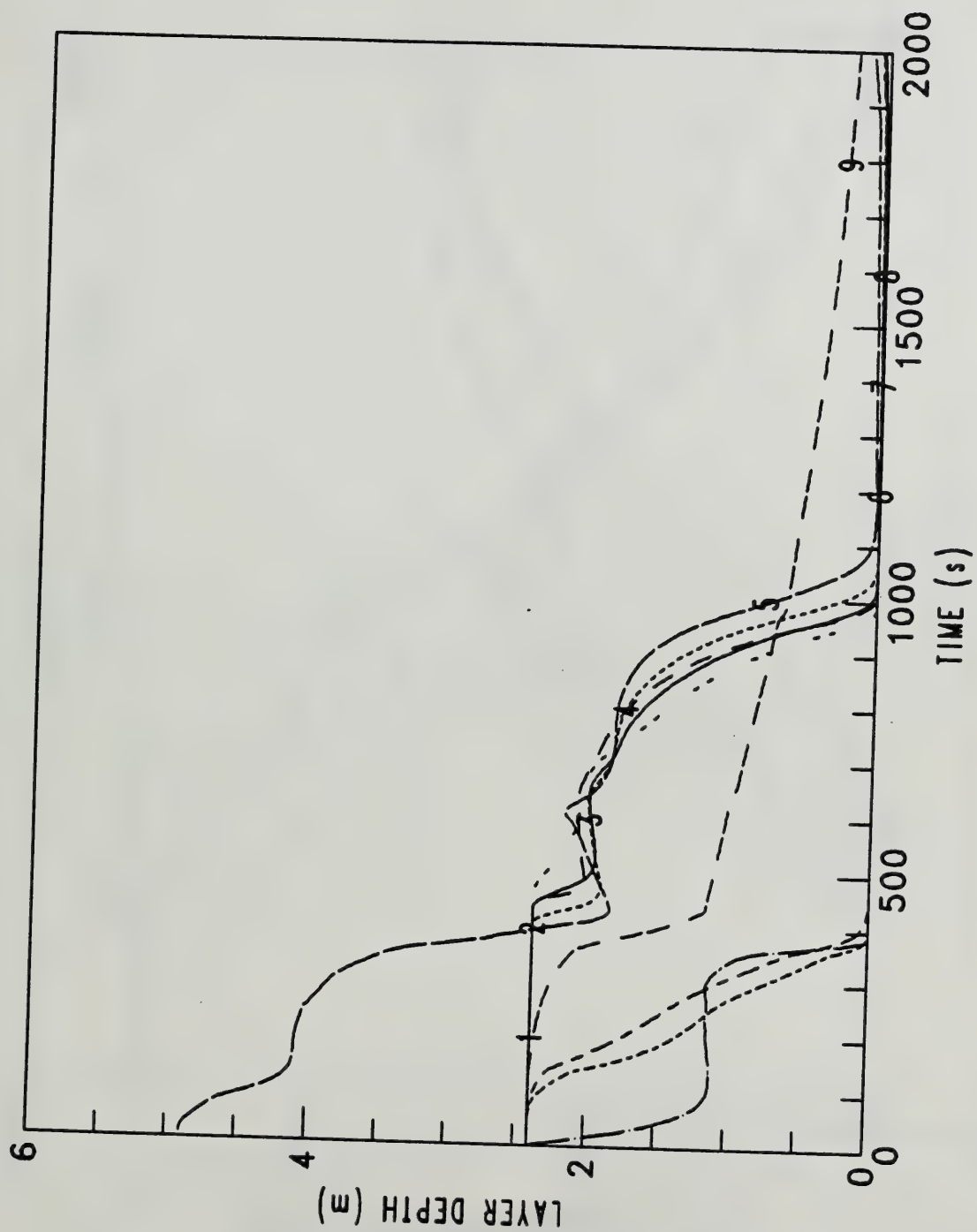
**D. OUTPUT - GRAPHS FOR FIRE #8**

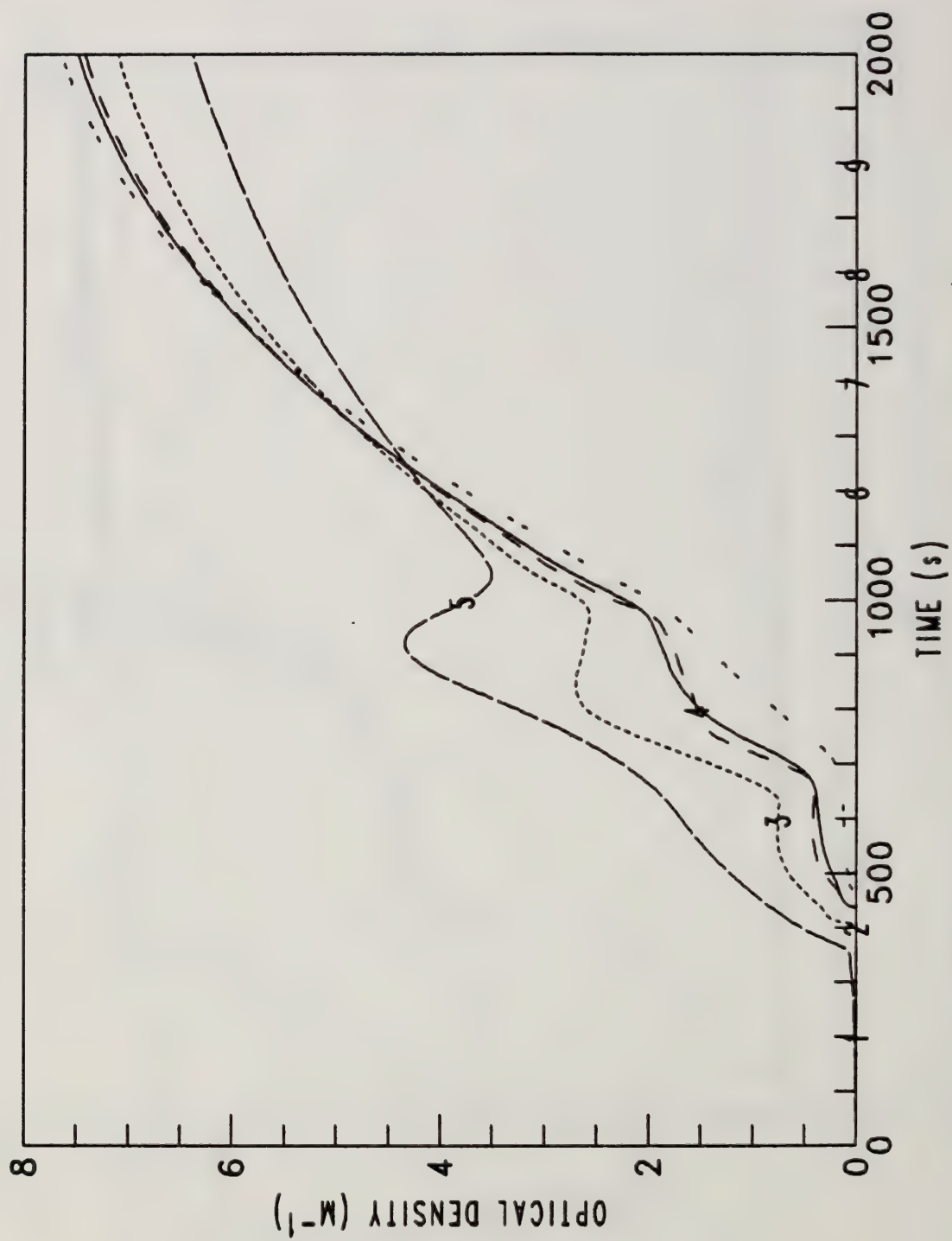




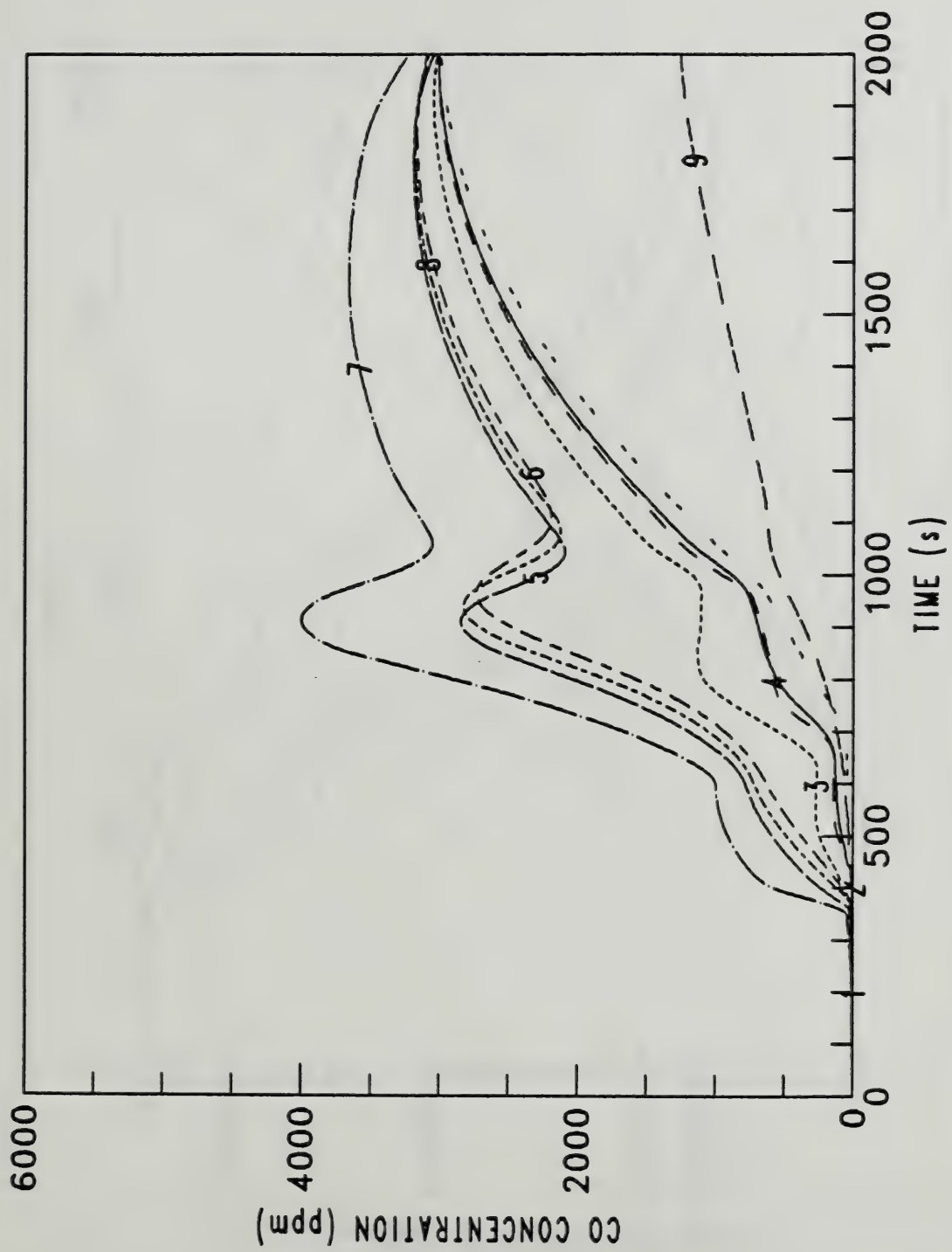


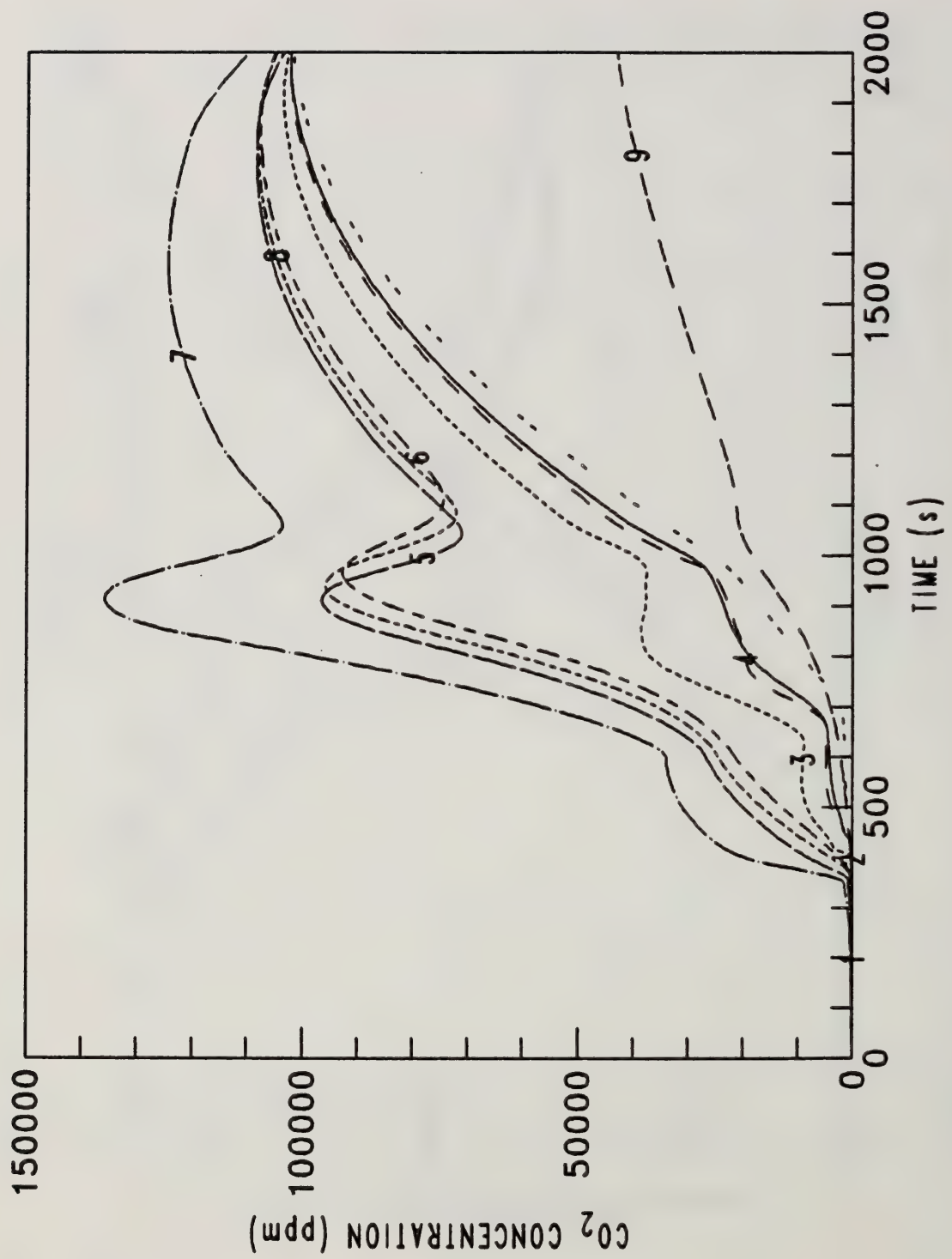


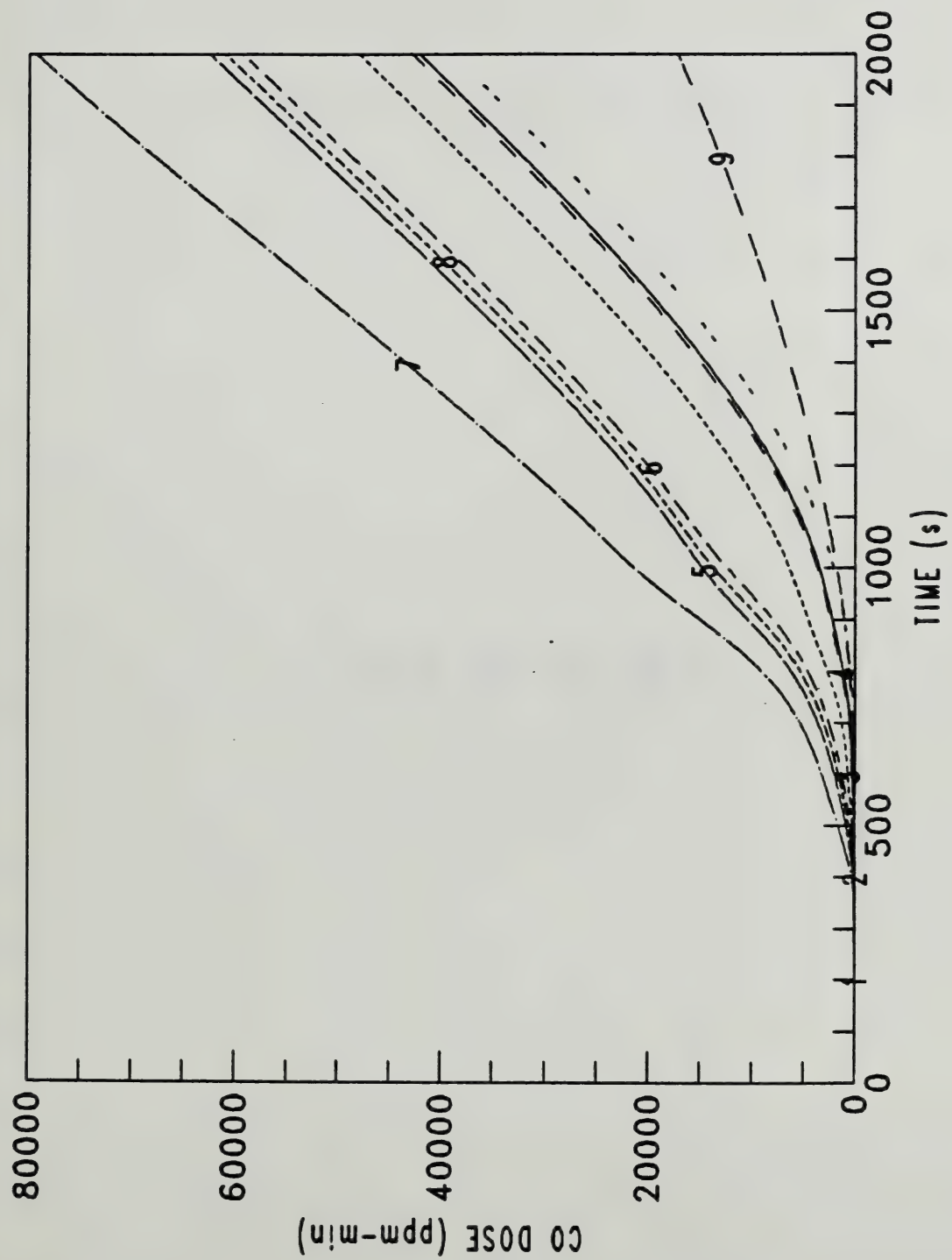














**E. COMPUTER FILES FOR FIRE #8**



**TWO STORY BUILDING ,OFFICE**

TOTAL COMPARTMENTS = 9  
MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

[illegible]

## CONNECTIONS

[illegible]

HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
  
9 ( 1) BW= 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00  
HH= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HL= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00  
HHP= 0.00 0.00 0.00 0.00 4.80 0.00 0.00 0.00 0.00 0.00  
HLP= 0.00 0.00 0.00 0.00 2.70 0.00 0.00 0.00 0.00 0.00

CEILING

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FLOOR

COND = 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04 1.000E-04  
SPHT = 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00 1.400E+00  
DNSTY= 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02 3.000E+02  
THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 7  
TIME STEP IS 1.00 SECONDS  
PRINT EVERY 100 TIME STEPS  
NUMBER OF FIRE INTERVALS = 8  
TOTAL TIME INTERVAL = 2000  
FIRE SOURCE = 1  
FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.  
AMBIENT AIR TEMPERATURE (K) = 300.  
AMBIENT REFERENCE PRESSURE (KPA) = 101.30  
EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 1.00E-04 8.00E-04 1.80E-02 7.00E-03 4.00E-02 2.40E-02 1.20E-02 5.00E-03  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
CO2= 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6  
CO= 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02  
OD= 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02

CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
FTIME= 2.40E+02 1.10E+02 25. 2.25E+02 2.50E+02 6.00E+02 4.00E+02 1.50E+02 1.0



[illegible]

O2	/	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	G/M <sup>3</sup>	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.1	300.0	301.7	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	2.3	0.0	15.1	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.3	0.0	1.6	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.1	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.1	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.080E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.167E-05	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.542E-01	0.000E+00	0.000E+00	0.000E+00
QSRW	7.188E-10	-2.246E-09	-2.543E-09	1.349E-07	4.163E-05	-8.216E-07	8.356E-04	-8.187E-07	-8.206E-07	-8.206E-07
	1.419E-12	-3.925E-09	-4.437E-09	1.318E-08	6.099E-06	2.727E-07	7.030E-04	1.999E-07	2.287E-07	2.287E-07
QSCW	1.385E-11	-3.444E-11	-4.218E-11	2.849E-08	9.481E-05	-5.206E-10	4.724E-03	-5.395E-10	-5.293E-10	-5.293E-10
	4.541E-10	4.922E-09	5.764E-09	4.021E-08	-7.921E-09	-1.014E-05	-2.416E-05	-9.929E-06	-1.003E-05	-1.003E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	10.4	1.192E-02	2.767E-04	9.960E-03	9.960E-03
CO	PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.305	3.511E-04	8.152E-06	2.935E-04	2.935E-04
OD	1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.086E-04	9.298E-07	9.629E-03	7.772E-07	7.772E-07
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.004E-02	1.274E-06	9.759E-02	4.913E-08	1.163E-06



TIME = 200.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	301.0	300.0	304.8	300.1	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	9.1	0.0	17.1	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	1.0	0.0	1.8	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.4	300.0	300.0
UM. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.3	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.1	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.1	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.466E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.333E-05	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.508E+00	0.000E+00	0.000E+00
QSRW	1.008E-09	9.029E-09	1.063E-08	4.967E-08	4.839E-04	-1.566E-07	2.129E-03	3.319E-05	2.328E-06
	-2.809E-10	-3.120E-09	-3.545E-09	-6.741E-09	8.703E-05	8.139E-07	2.746E-03	1.245E-05	1.511E-06
QSCW	1.666E-12	2.353E-11	2.914E-11	2.187E-10	2.271E-03	5.428E-07	1.803E-02	7.119E-05	2.922E-06
	7.207E-10	6.010E-09	7.044E-09	2.919E-08	-6.732E-07	-9.306E-06	-1.098E-04	-9.070E-06	-9.108E-06

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	2.070E+05	2.069E+05	2.070E+05	2.065E+05	2.069E+05	2.070E+05
CO2	PPM	0.000E+00	0.000E+00	0.000E+00	100.	31.8	392.	70.8	32.0
CO	PPM	0.000E+00	0.000E+00	0.000E+00	2.95	0.937	11.5	2.09	0.943
OD	1/M	0.000E+00	0.000E+00	0.000E+00	7.800E-03	2.481E-03	3.009E-02	5.523E-03	2.497E-03
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	0.107	1.839E-02	0.552	3.473E-02	1.832E-02

TIME = 300.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	303.7	300.0	315.7	300.3	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	15.0	3.6	16.8	7.7	3.3
UL. THICK	0.0	0.0	0.0	0.0	1.7	0.2	1.7	0.8	0.2
CE. TEMP	300.0	300.0	300.0	300.0	300.2	300.0	301.6	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.2	300.0	301.1	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.2	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.3	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.328E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.818E-04	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.721E+00	0.000E+00	0.000E+00
QSRW	2.615E-09	1.186E-08	1.164E-08	1.028E-07	1.863E-03	7.444E-06	6.918E-03	1.356E-04	3.665E-06
	-3.007E-10	-5.312E-09	-6.898E-09	-3.170E-10	4.547E-04	5.423E-06	9.697E-03	6.510E-05	3.079E-06
QSCW	4.310E-11	-2.433E-12	-1.505E-11	1.000E-08	1.337E-02	1.222E-05	8.367E-02	4.115E-04	5.917E-06
	1.622E-09	8.271E-09	9.500E-09	2.617E-08	-7.535E-06	-8.615E-06	-4.745E-04	-8.556E-06	-8.284E-06

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	2.070E+05	2.070E+05	2.064E+05	2.070E+05	2.053E+05	2.069E+05	2.070E+05
CO2 PPM	0.000E+00	0.000E+00	0.000E+00	418.	6.92	1.261E+03	37.7	5.26
CO PPM	0.000E+00	0.000E+00	0.000E+00	12.3	0.204	37.2	1.11	0.155
OD 1/M	0.000E+00	0.000E+00	0.000E+00	3.226E-02	5.396E-04	9.352E-02	2.940E-03	4.107E-04
CT GM/M3	0.000E+00	0.000E+00	0.000E+00	0.502	4.421E-02	1.78	6.188E-02	4.340E-02

TIME = 400.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	425.1	345.2	564.3	358.0	332.7
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0	300.7	300.1	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	15.6	40.6	17.8	21.1	26.5
UL. THICK	0.0	0.0	0.0	0.0	1.7	1.8	1.9	2.2	1.8
CE. TEMP	300.0	300.0	300.0	300.0	316.3	304.2	344.2	304.8	302.8
UW. TEMP	300.0	300.0	300.0	300.0	311.1	302.8	330.7	303.2	301.9
LW. TEMP	300.0	300.0	300.0	300.0	300.3	300.3	305.6	300.5	300.2
FL. TEMP	300.0	300.0	300.0	300.0	300.6	300.6	309.4	300.8	300.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.475E-01	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.678E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.037E+02	0.000E+00	0.000E+00
QSRW	4.087E-08	6.292E-08	5.698E-08	1.025E-07	1.059E-01	2.281E-02	4.052E-01	3.709E-02	1.660E-02
	-1.269E-08	-2.256E-08	-2.090E-08	-1.518E-08	2.988E-02	3.605E-02	4.731E-01	5.714E-02	2.367E-02
QSCW	5.380E-11	2.033E-10	4.517E-11	1.170E-10	1.084E+00	3.317E-01	2.341E+00	4.605E-01	2.221E-01
	5.660E-08	7.044E-08	6.442E-08	7.131E-08	-1.141E-03	-1.155E-03	-4.296E-02	-1.658E-03	-6.966E-04
UPPER LAYER SPECIES CONCENTRATION									
O2 PPM	2.070E+05	2.070E+05	2.070E+05	2.070E+05	1.911E+05	2.006E+05	1.783E+05	1.994E+05	2.024E+05
CO2 PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.149E+04	4.615E+03	2.075E+04	5.495E+03	3.339E+03
CO PPM	0.000E+00	0.000E+00	0.000E+00	0.000E+00	338.	136.	611.	162.	98.4
OD 1/M	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.633	0.313	0.861	0.359	0.235
CT GM/M3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.35	1.71	10.1	1.86	1.46



TIME = 500.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	482.7	338.0	628.4	417.6	330.3
L. TEMP	300.0	300.0	300.0	300.0	300.9	302.0	327.1	319.9	301.7
UL. VOLUM	0.0	0.0	0.0	0.0	19.6	53.8	22.8	23.0	33.9
UL. THICK	0.0	0.0	0.0	0.0	2.2	2.3	2.4	2.4	2.4
CE. TEMP	300.0	300.0	300.0	300.0	346.0	308.8	397.2	325.1	306.7
UW. TEMP	300.0	300.0	300.0	300.0	333.0	306.1	372.6	317.6	304.6
LW. TEMP	300.0	300.0	300.0	300.0	301.9	301.7	333.0	305.9	301.3
FL. TEMP	300.0	300.0	300.0	300.0	303.1	302.8	352.6	309.0	302.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.665E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.189E-02	0.000E+00	0.000E+00
OF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.152E+02	0.000E+00	0.000E+00
QSRW	1.056E-07	9.887E-08	2.352E-06	8.921E-07	1.695E-01	9.990E-03	6.008E-01	8.036E-02	9.537E-03
	-3.097E-08	-3.494E-08	-7.959E-07	-1.221E-07	8.123E-02	5.850E-02	1.298E+00	2.309E-01	4.492E-02
QSCW	5.064E-10	4.485E-10	3.338E-08	9.407E-09	1.347E+00	2.117E-01	2.301E+00	8.749E-01	1.623E-01
	7.766E-08	6.303E-08	2.608E-06	8.779E-07	-7.348E-03	-1.739E-03	-1.730E-01	3.590E-03	-7.604E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	1.586E+05	1.959E+05	1.430E+05	1.708E+05	1.979E+05
CO2	PPM	0.000E+00	0.000E+00	3.495E+04	8.058E+03	4.621E+04	2.607E+04	6.560E+03
CO	PPM	0.000E+00	0.000E+00	1.030E+03	237.	1.362E+03	768.	193.
OD	1/M	0.000E+00	0.000E+00	1.70	0.558	1.72	1.46	0.465
CT	GM/M3	0.000E+00	0.000E+00	32.2	12.6	40.1	22.8	10.4

U. TEMP	300.0	300.0	300.0	300.0	452.0	326.9	555.4	404.8	323.8
L. TEMP	300.0	300.0	300.0	300.0	301.5	303.5	332.2	315.3	302.9
UL. VOLUM	0.0	0.0	0.0	0.0	19.5	55.0	22.7	23.0	34.6
UL. THICK	0.0	0.0	0.0	0.0	2.2	2.4	2.4	2.4	2.4
CE. TEMP	300.0	300.0	300.0	300.0	354.0	308.6	405.0	332.8	306.9
UW. TEMP	300.0	300.0	300.0	300.0	339.8	306.1	380.4	323.7	304.9
LW. TEMP	300.0	300.0	300.0	300.0	303.0	302.2	342.6	309.3	301.7
FL. TEMP	300.0	300.0	300.0	300.0	304.8	303.6	363.8	314.9	302.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.056E-02	0.000E+00	0.000E+00
PYROLYS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.000E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.267E+02	0.000E+00	0.000E+00
QSRW	1.338E-07	1.465E-07	3.978E-06	1.493E-06	8.288E-02	3.416E-03	2.579E-01	5.041E-02	5.356E-03
	-3.852E-08	-5.150E-08	-1.350E-06	-1.970E-07	7.831E-02	4.485E-02	8.994E-01	2.245E-01	3.801E-02
	8.492E-10	8.045E-10	6.499E-08	2.639E-08	8.927E-01	1.158E-01	1.381E+00	6.340E-01	1.045E-01
QSCW	6.879E-08	1.041E-07	2.363E-06	9.220E-07	-1.191E-02	-9.103E-05	-2.306E-01	4.226E-05	1.106E-06

O <sub>2</sub>	/	2.070E+05	2.070E+05	2.070E+05	1.413E+05	1.934E+05	1.324E+05	1.481E+05	1.944E+05
CO <sub>2</sub>	/	0.000E+00	0.000E+00	0.000E+00	4.747E+04	9.848E+03	5.385E+04	4.274E+04	9.089E+03
CO	/	0.000E+00	0.000E+00	0.000E+00	1.399E+03	290.	1.587E+03	1.259E+03	268.
OD	/M	0.000E+00	0.000E+00	0.000E+00	2.46	0.705.	2.27	2.47	0.657
CT	GM/M3	0.000E+00	0.000E+00	0.000E+00	82.9	27.7	88.4	70.9	23.7



TIME = 500.0 SECONDS.

U. TEMP	300.0	300.0	300.0	482.7	338.0	628.4	417.6	330.3
L. TEMP	300.0	300.0	300.0	300.9	302.0	327.1	319.9	301.7
UL. VOLUM	0.0	0.0	0.0	19.6	53.8	22.8	23.0	33.9
UL. THICK	0.0	0.0	0.0	2.2	2.3	2.4	2.4	2.4
CE. TEMP	300.0	300.0	300.0	346.0	308.8	397.2	325.1	306.7
UW. TEMP	300.0	300.0	300.0	333.0	306.1	372.6	317.6	304.6
LW. TEMP	300.0	300.0	300.0	301.9	301.7	333.0	305.9	301.3
FL. TEMP	300.0	300.0	300.0	303.1	302.8	352.6	309.0	302.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.665E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.189E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.152E+02	0.000E+00	0.000E+00
QSRW	1.056E-07	9.887E-08	2.352E-06	8.921E-07	1.695E-01	6.008E-03	8.036E-02	9.537E-03
	-3.097E-08	-3.494E-08	-7.959E-07	-1.221E-07	8.123E-02	5.850E-02	1.298E+00	2.309E-01
QSCW	5.064E-10	4.485E-10	3.338E-08	9.407E-09	1.347E+00	2.117E-01	2.301E+00	8.749E-01
	7.766E-08	6.303E-08	2.608E-06	8.779E-07	-7.348E-03	-1.739E-03	3.390E-03	-7.604E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.070E+05	1.586E+05	1.959E+05	1.430E+05	1.708E+05	1.979E+05
CO2	PPM	0.000E+00	0.000E+00	3.495E+04	8.058E+03	4.621E+04	2.607E+04	6.560E+03
CO	PPM	0.000E+00	0.000E+00	1.030E+03	237.	1.362E+03	768.	193.
OD	1/M	0.000E+00	0.000E+00	1.70	0.558	1.72	1.46	0.465
CT	GM/M3	0.000E+00	0.000E+00	32.2	12.6	40.1	22.8	10.4

U. TEMP	300.0	300.0	300.0	300.0	300.0	452.0	326.9	555.4	404.8	323.8
L. TEMP	300.0	300.0	300.0	300.0	300.0	301.5	303.5	332.2	315.3	302.9
UL. VOLUM	0.0	0.0	0.0	0.0	0.0	19.5	55.0	22.7	23.0	34.6
UL. THICK	0.0	0.0	0.0	0.0	0.0	2.2	2.4	2.4	2.4	2.4
CE. TEMP	300.0	300.0	300.0	300.0	300.0	354.0	308.6	405.0	332.8	306.9
UM. TEMP	300.0	300.0	300.0	300.0	300.0	339.8	306.1	380.4	323.7	304.9
LW. TEMP	300.0	300.0	300.0	300.0	300.0	303.0	302.2	342.6	309.3	301.7
FL. TEMP	300.0	300.0	300.0	300.0	300.0	304.8	303.6	363.8	314.9	302.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.056E-02	0.000E+00	0.000E+00
PYROLYS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.000E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.267E+02	0.000E+00	0.000E+00
QSRW	1.338E-07	1.465E-07	3.978E-06	1.493E-06	8.288E-02	3.416E-03	2.579E-01	5.041E-02	5.356E-03	5.356E-03
	-3.852E-08	-5.150E-08	-1.350E-06	-1.970E-07	7.831E-02	4.485E-02	8.994E-01	2.245E-01	3.801E-02	3.801E-02
	8.492E-10	8.045E-10	6.499E-08	2.639E-08	8.927E-01	1.158E-01	1.381E+00	6.340E-01	1.045E-01	1.045E-01
QSCW	6.879E-08	1.041E-07	2.363E-06	9.220E-07	-1.191E-02	-9.103E-05	-2.306E-01	4.226E-05	1.106E-06	1.106E-06

/	2.070E+05	2.070E+05	2.070E+05	1.413E+05	1.934E+05	1.324E+05	1.481E+05	1.944E+05
O <sub>2</sub>	/	0.000E+00	0.000E+00	0.000E+00	4.747E+04	9.848E+03	5.385E+04	9.089E+03
CO <sub>2</sub>	/	0.000E+00	0.000E+00	0.000E+00	1.399E+03	290.	1.587E+03	268.
CO	/	0.000E+00	0.000E+00	0.000E+00	2.46	0.705.	2.27	0.657
OD	/M	0.000E+00	0.000E+00	0.000E+00	82.9	27.7	88.4	23.7
CT	G/M <sup>3</sup>	0.000E+00	0.000E+00	0.000E+00				

TIME = 700.0 SECONDS.

U. TEMP	300.0	300.0	308.9	300.0	531.8	323.7	764.6	444.3	322.1
L. TEMP	300.0	300.0	300.3	300.1	302.8	304.1	421.3	321.0	303.4
UL. VOLUM	0.0	0.0	0.1	0.0	25.5	55.7	23.0	23.0	34.6
UL. THICK	0.0	0.0	0.0	0.0	2.8	2.4	2.4	2.4	2.4
CE. TEMP	300.0	300.0	300.1	300.0	372.4	308.3	456.6	342.4	307.0
UW. TEMP	300.0	300.0	300.1	300.0	354.0	306.0	422.1	331.0	305.0
LW. TEMP	300.0	300.0	300.0	300.0	304.9	302.4	378.7	313.0	302.0
FL. TEMP	300.0	300.0	300.0	300.0	307.8	304.1	422.5	321.1	303.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.020E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.020E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.656E+02	0.000E+00	0.000E+00
QSRW	4.588E-07	6.609E-07	4.739E-03	8.101E-06	2.654E-01	2.659E-03	1.488E+00	1.004E-01	4.561E-03
	-1.332E-07	-2.309E-07	2.172E-03	-1.118E-06	1.690E-01	3.869E-02	2.485E+00	3.271E-01	3.434E-02
QSCW	4.007E-09	6.428E-09	4.534E-02	1.619E-07	1.553E+00	9.212E-02	2.972E+00	9.551E-01	8.986E-02
	5.864E-07	8.143E-07	2.873E-05	1.055E-05	-2.110E-02	-4.915E-07	-7.022E-06	-3.451E-06	-5.208E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	2.070E+05	1.928E+05	2.070E+05	1.064E+05	1.959E+05	8.024E+04	1.227E+05	2.004E+05
CO2 PPM	0.000E+00	0.000E+00	1.070E+04	0.000E+00	7.561E+04	1.276E+04	9.518E+04	6.394E+04	1.289E+04
CO PPM	0.000E+00	0.000E+00	315.	0.000E+00	2.228E+03	376.	2.804E+03	1.884E+03	380.
OD 1/M	0.000E+00	0.000E+00	0.811	0.000E+00	3.33	0.923	2.91	3.37	0.937
CT GM/M3	0.000E+00	0.000E+00	0.520	0.000E+00	150.	46.8	149.	139.	42.5

THE FIRE BECAME VENTILATION CONTROLLED AT 781. SECONDS  
CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 800.0 SECONDS.

U. TEMP	304.0	300.0	358.8	307.9	627.1	323.6	989.5	506.1	322.9
L. TEMP	300.1	300.1	300.6	300.3	305.4	304.6	581.3	336.9	303.9
UL. VOLUM	0.7	0.0	9.1	0.5	26.3	55.7	23.0	23.0	34.6
UL. THICK	0.0	0.0	0.4	0.2	2.9	2.4	2.4	2.4	2.4
CE. TEMP	300.1	300.0	309.8	300.3	410.0	308.6	586.4	364.2	307.6
UW. TEMP	300.1	300.0	306.6	300.2	383.7	306.2	537.0	347.6	305.5
LW. TEMP	300.0	300.0	300.7	300.0	309.9	302.7	476.3	322.0	302.3
FL. TEMP	300.0	300.0	301.2	300.0	315.5	304.6	583.3	335.4	303.9
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.340E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.340E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.045E+02	0.000E+00	0.000E+00
QSRW	1.628E-03	4.616E-06	3.736E-03	3.438E-03	5.758E-03	2.715E-03	4.550E+00	2.030E-01	4.708E-03
	9.543E-04	-1.626E-06	3.615E-02	9.980E-04	3.336E-01	3.739E-02	5.357E+00	5.682E-01	3.496E-02
QSCW	1.521E-02	7.853E-08	4.094E-01	3.702E-02	2.110E+00	8.912E-02	3.558E+00	1.371E+00	9.168E-02
	1.820E-06	4.208E-06	-1.407E-03	2.462E-05	-5.340E-02	-5.311E-07	-4.805E-06	2.648E-04	-5.768E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.924E+05	2.070E+05	1.178E+05	1.883E+05	3.239E+04	1.978E+05	0.000E+00	5.490E+04	2.003E+05
CO2	PPM	1.093E+04	0.000E+00	6.707E+04	1.400E+04	1.351E+05	1.690E+04	1.711E+05	1.147E+05	1.770E+04
CO	PPM	322.	0.000E+00	1.976E+03	413.	3.982E+03	498.	5.040E+03	3.379E+03	521.
OD	1/M	0.842	0.000E+00	4.38	1.07	5.05	1.22	4.05	5.30	1.28
CT	GM/M3	3.46	0.000E+00	72.0	4.00	248.	72.4	231.	240.	68.8

TIME = 900.0 SECONDS.

U. TEMP	312.2	302.0	365.8	322.2	678.9	323.6	1105.1	543.0	324.0
L. TEMP	300.1	300.1	301.6	300.5	309.6	305.1	752.7	356.7	304.5
UL. VOLUM	5.8	3.9	10.5	1.4	26.1	55.7	23.0	23.0	34.6
UL. THICK	0.4	0.1	0.4	0.5	2.9	2.4	2.4	2.4	2.4
CE. TEMP	301.5	300.1	316.1	303.4	447.0	309.1	738.7	386.3	308.3
UW. TEMP	301.0	300.1	311.0	302.3	414.3	306.6	682.7	365.1	306.0
LW. TEMP	300.1	300.0	301.6	300.1	316.9	303.0	584.4	334.2	302.6
FL. TEMP	300.2	300.0	302.7	300.2	325.7	305.1	753.9	354.3	304.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.867E-02	0.000E+00	0.000E+00
PYROLITS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.867E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.999E+02	0.000E+00	0.000E+00
QSRW	1.706E-03	5.575E-04	-1.335E-02	5.019E-03	7.602E-01	2.406E-03	6.802E+00	2.746E-01	4.748E-03
	4.890E-03	6.874E-04	5.058E-02	5.385E-02	4.883E-03	3.688E-02	5.999E+00	7.597E-01	3.655E-02
QSCW	5.809E-02	5.898E-03	4.113E-01	1.216E-01	2.176E+00	8.494E-02	2.844E+00	1.491E+00	9.434E-02
	-1.240E-04	3.557E-06	-2.593E-03	2.268E-05	-9.871E-02	-5.238E-07	-1.015E-04	4.812E-04	-6.020E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.548E+05	1.884E+05	7.428E+04	1.161E+05	1.276E+04	1.954E+05	0.000E+00	1.720E+04	1.949E+05
CO2 PPM	4.210E+04	1.462E+04	1.154E+05	7.377E+04	2.160E+05	2.188E+04	2.598E+05	1.922E+05	2.408E+04
CO PPM	1.240E+03	431.	3.400E+03	2.173E+03	6.363E+03	645.	7.655E+03	5.662E+03	709.
OD 1/M	3.16	1.13	7.39	5.36	7.45	1.58	5.50	8.28	1.74
CT GM/M3	51.6	14.7	212.	84.4	397.	106.	344.	401.	105.



TIME = 1000.0 SECONDS.

U. TEMP	312.0	302.5	362.9	322.0	691.0	323.3	1118.5	553.9	324.8
L. TEMP	300.2	300.1	303.7	300.9	314.0	305.5	829.0	372.1	305.1
UL. VOLUM	7.6	9.1	10.0	1.4	25.9	55.7	23.0	23.0	34.6
UL. THICK	0.5	0.3	0.4	0.5	2.9	2.4	2.4	2.4	2.4
CE. TEMP	302.1	300.3	318.3	304.6	470.9	309.6	815.9	401.9	309.1
UW. TEMP	301.4	300.2	312.7	303.1	434.8	307.0	758.6	378.0	306.6
LW. TEMP	300.2	300.0	302.2	300.2	323.6	303.3	638.0	344.8	303.0
FL. TEMP	300.3	300.1	303.8	300.4	334.9	305.6	829.7	370.8	305.1
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.600E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.516E+02	0.000E+00	0.000E+00
QSRW	-1.095E-04	4.763E-04	-2.380E-02	1.524E-03	7.401E-01	1.941E-03	6.482E+00	2.847E-01	4.571E-03
	5.921E-03	1.009E-03	5.146E-02	6.284E-03	5.722E-01	3.636E-02	5.256E+00	8.183E-01	3.801E-02
QSCW	5.215E-02	7.362E-03	3.575E-01	1.092E-01	1.993E+00	7.959E-02	2.155E+00	1.407E+00	9.487E-02
	-1.190E-04	2.024E-06	-2.989E-05	6.688E-05	-1.381E-01	-5.007E-07	-7.605E-05	2.061E-04	-6.056E-07

UPPER LAYER SPECIES CONCENTRATION

O2	1.271E+05	1.754E+05	5.239E+04	7.805E+04	9.266E+03	1.915E+05	0.000E+00	1.011E+04	1.883E+05
CO2	7.113E+04	2.688E+04	1.624E+05	1.212E+05	2.822E+05	2.788E+04	3.217E+05	2.630E+05	3.244E+04
CO	2.096E+03	792.	4.785E+03	3.570E+03	8.315E+03	822.	9.478E+03	7.749E+03	956.
OD	5.34	2.08	10.5	8.81	9.56	2.02	6.73	11.1	2.34
CT	153.	52.1	425.	253.	601.	148.	491.	634.	153.

TIME = 1100.0 SECONDS.

U. TEMP	311.5	303.2	362.3	323.3	697.8	323.3	1121.9	560.9	325.7
L. TEMP	300.9	300.3	306.0	302.7	318.4	306.0	875.3	385.7	305.7
UL. VOLUM	8.6	12.7	9.5	1.3	25.8	55.7	23.0	23.0	34.6
UL. THICK	0.6	0.5	0.4	0.4	2.9	2.4	2.4	2.4	2.4
CE. TEMP	302.5	300.4	320.1	305.6	489.0	310.0	864.8	414.4	309.9
UW. TEMP	301.7	300.3	314.0	303.9	450.4	307.3	806.5	388.4	307.2
LW. TEMP	300.3	300.1	302.9	300.4	330.1	303.6	675.8	354.5	303.4
FL. TEMP	300.5	300.1	304.7	300.5	343.5	306.0	875.8	385.0	305.7
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.33E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.33E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.033E+02	0.000E+00	0.000E+00
QSRW	-1.076E-03	5.199E-04	-3.071E-02	-9.012E-04	7.009E-01	1.574E-03	5.934E+00	2.887E-01	4.374E-03
	6.274E-03	1.456E-03	5.275E-02	7.043E-03	6.380E-01	3.625E-02	4.740E+00	8.443E-01	3.956E-02
QSCW	4.612E-02	1.016E-02	3.315E-01	1.115E-01	1.838E+00	7.601E-02	1.715E+00	1.324E+00	9.539E-02
	3.962E-05	2.064E-05	2.025E-04	4.061E-04	-1.742E-01	-4.860E-07	-4.849E-05	1.030E-04	-6.068E-07

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.077E+05	1.567E+05	3.871E+04	6.163E+04	8.665E+04	1.875E+05	0.000E+00	8.816E+03	1.818E+05
CO2 PPM	9.838E+04	4.717E+04	2.100E+05	1.614E+05	3.328E+05	3.489E+04	3.685E+05	3.179E+05	4.255E+04
CO PPM	2.899E+03	1.390E+03	6.187E+03	4.755E+03	9.807E+03	1.028E+03	1.086E+04	9.367E+03	1.254E+03
OD 1/M	7.40	3.64	13.6	11.7	11.2	2.53	7.69	13.3	3.06
CT GM/M3	305.	119.	712.	501.	848.	202.	663.	925.	217.

TIME = 1200.0 SECONDS.

U. TEMP	311.0	303.5	361.3	321.6	701.9	323.5	1119.1	565.9	326.5
L. TEMP	302.0	300.9	308.5	304.2	322.5	306.4	906.4	397.8	306.2
UL. VOLUM	8.9	15.8	9.1	1.3	25.7	55.7	23.0	23.0	34.6
UL. THICK	0.6	0.6	0.4	0.4	2.9	2.4	2.4	2.4	2.4
CE. TEMP	302.7	300.5	321.6	306.2	503.9	310.5	898.6	425.2	310.6
UW. TEMP	301.8	300.4	315.2	304.3	462.9	307.7	837.7	397.5	307.8
LW. TEMP	300.4	300.1	303.5	300.6	336.5	303.9	706.1	363.4	303.8
FL. TEMP	300.6	300.1	305.7	300.7	351.4	306.4	906.6	397.6	306.2
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.067E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.551E+02	0.000E+00	0.000E+00
QSRW	-1.756E-03	3.736E-04	-3.668E-02	-3.604E-03	6.501E-01	1.259E-03	5.278E+00	2.888E-01	4.146E-03
	6.386E-03	1.756E-03	5.336E-02	7.139E-03	6.934E-01	3.647E-02	4.368E+00	8.570E-01	4.111E-02
QSCW	4.157E-02	1.080E-02	3.064E-01	9.287E-02	1.698E+00	7.358E-02	1.390E+00	1.244E+00	9.563E-02
	2.289E-04	1.061E-04	5.682E-04	7.509E-04	-2.083E-01	-4.703E-07	-4.863E-06	2.530E-05	-5.984E-07

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.274E+04	1.400E+05	3.012E+04	6.115E+04	8.551E+03	1.835E+05	0.000E+00	8.585E+03	1.755E+05
CO2 PPM	1.256E+05	6.867E+04	2.536E+05	1.886E+05	3.710E+05	4.260E+04	4.032E+05	3.596E+05	5.391E+04
CO PPM	3.700E+03	2.023E+03	7.474E+03	5.557E+03	1.093E+04	1.255E+03	1.188E+04	1.059E+04	1.588E+03
OD 1/M	9.45	5.30	16.4	13.7	12.4	3.08	8.43	14.9	3.86
CT GM/M3	506.	226.	1.070E+03	809.	1.130E+03	269.	855.	1.261E+03	299.



TIME = 1300.0 SECONDS.

U. TEMP	310.5	303.4	359.9	320.9	703.7	323.8	1111.2	569.5	327.3
L. TEMP	303.6	301.6	311.1	305.5	326.7	306.8	926.4	409.0	306.8
UL. VOLUM	8.8	19.1	8.6	1.2	25.6	55.7	23.0	23.0	34.6
UL. THICK	0.6	0.7	0.4	0.4	2.8	2.4	2.4	2.4	2.4
CE. TEMP	302.9	300.6	322.8	306.5	516.6	311.0	921.7	434.8	311.4
UW. TEMP	302.0	300.4	316.0	304.6	473.2	308.0	856.2	405.4	308.3
LW. TEMP	300.6	300.2	304.3	300.8	342.8	304.3	731.7	371.8	304.2
FL. TEMP	300.7	300.2	306.5	300.8	358.9	306.9	926.8	408.7	306.8
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.800E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.800E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.068E+02	0.000E+00	0.000E+00
QSRW	-2.401E-03	2.161E-04	-4.185E-02	-5.240E-03	5.892E-01	9.625E-04	4.567E+00	2.844E-01	3.881E-03
	6.305E-03	1.889E-03	5.319E-02	7.169E-02	7.403E-01	3.689E-02	4.085E+00	8.628E-01	4.260E-02
QSCW	3.722E-02	9.979E-03	2.802E-01	8.447E-02	1.567E+00	7.178E-02	1.135E+00	1.164E+00	9.546E-02
	5.881E-04	2.382E-04	1.084E-03	1.120E-03	-2.387E-01	-4.587E-07	-1.917E-04	4.015E-05	-5.775E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	8.069E+04	1.271E+05	2.430E+04	5.188E+04	8.480E+03	1.796E+05	0.000E+00	8.506E+03	1.694E+05
CO2	PPM	1.527E+05	8.822E+04	2.923E+05	2.252E+05	3.991E+05	5.080E+04	4.283E+05	3.906E+05	6.606E+04
CO	PPM	4.500E+03	2.599E+03	8.612E+03	6.636E+03	1.176E+04	1.497E+03	1.262E+04	1.151E+04	1.946E+03
OD	1/M	11.5	6.81	19.0	16.4	13.3	3.67	9.02	16.1	4.73
CT	GM/M3	756.	370.	1.493E+03	1.168E+03	1.436E+03	350.	1.064E+03	1.631E+03	402.

TIME = 1400.0 SECONDS.

U. TEMP	309.9	303.5	356.7	315.5	703.3	324.0	1098.3	571.7	328.0
L. TEMP	305.3	303.0	313.4	307.6	330.5	307.3	939.2	418.6	307.4
UL. VOLUM	8.3	22.0	8.4	1.3	25.6	55.7	23.0	23.0	34.6
UL. THICK	0.5	0.8	0.4	0.4	2.8	2.4	2.4	2.4	2.4
CE. TEMP	303.0	300.7	323.5	306.3	527.2	311.5	936.1	443.5	312.2
UW. TEMP	302.1	300.5	316.6	304.4	481.4	308.4	863.9	412.4	308.9
LW. TEMP	300.8	300.3	305.0	301.1	348.9	304.6	753.2	379.7	304.6
FL. TEMP	300.8	300.2	307.3	301.0	365.8	307.3	938.3	418.4	307.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.533E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.533E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.585E+02	0.000E+00	0.000E+00
QSRW	-3.007E-03	3.162E-04	-4.623E-02	-6.946E-03	5.198E-01	6.660E-04	3.832E+00	2.754E-01	3.578E-03
	6.024E-03	1.920E-03	5.165E-02	6.103E-03	7.784E-01	3.743E-02	3.844E+00	8.643E-01	4.400E-02
QSCW	3.236E-02	9.830E-03	2.426E-01	4.745E-02	1.440E+00	7.026E-02	9.254E-01	1.085E+00	9.483E-02
	1.061E-03	5.543E-04	1.580E-03	1.764E-03	-2.665E-01	-4.455E-07	6.714E-05	1.795E-05	-5.788E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	7.086E+04	1.161E+05	2.207E+04	7.490E+04	8.380E+03	1.757E+05	0.000E+00	8.418E+03	1.635E+05
CO2	PPM	1.791E+05	1.077E+05	3.206E+05	1.955E+05	4.191E+05	5.928E+04	4.457E+05	4.130E+05	7.867E+04
CO	PPM	5.276E+03	3.172E+03	9.447E+03	5.760E+03	1.235E+04	1.747E+03	1.313E+04	1.217E+04	2.318E+03
OD	1/M	13.5	8.31	21.1	14.5	14.0	4.28	9.50	16.9	5.62
CT	GM/M3	1.055E+03	550.	1.972E+03	1.546E+03	1.760E+03	444.	1.284E+03	2.024E+03	525.



TIME = 1500.0 SECONDS.

U. TEMP	309.3	303.4	352.7	312.3	700.3	324.3	1078.6	572.3	328.6
L. TEMP	307.0	304.7	315.7	309.6	334.1	307.6	956.3	427.0	308.2
UL. VOLUM	7.8	24.5	8.1	1.3	25.5	55.7	23.0	23.0	34.6
UL. THICK	0.5	0.9	0.3	0.4	2.8	2.4	2.4	2.4	2.4
CE. TEMP	303.1	300.8	323.8	306.0	536.0	312.0	942.3	451.1	312.9
UW. TEMP	302.1	300.5	316.8	304.2	487.5	308.7	861.8	418.3	309.4
LW. TEMP	301.1	300.4	305.7	301.5	354.9	304.9	771.2	387.2	305.0
FL. TEMP	301.0	300.3	307.9	301.1	371.9	307.6	941.8	426.8	308.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.265E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.250E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.072E+02	0.000E+00	0.000E+00
QSRW	-3.158E-03	6.062E-04	-4.935E-02	-6.999E-03	4.394E-01	3.562E-04	3.056E+00	2.608E-01	3.235E-03
	5.538E-03	1.682E-03	4.912E-02	5.160E-03	8.055E-01	3.800E-02	3.586E+00	8.606E-01	4.526E-02
QSCW	2.809E-02	9.281E-03	2.031E-01	2.905E-02	1.313E+00	6.874E-02	7.395E-01	1.003E+00	9.366E-02
	1.577E-03	1.042E-03	2.154E-03	2.454E-03	-2.898E-01	-4.329E-07	2.279E-03	1.420E-05	2.683E-05

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	6.273E+04	1.082E+05	2.199E+04	8.358E+04	8.259E+03	1.719E+05	0.000E+00	8.301E+03	1.578E+05
CO2 PPM	2.043E+05	1.236E+05	3.390E+05	1.836E+05	4.324E+05	6.788E+04	4.563E+05	4.284E+05	9.145E+04
CO PPM	6.019E+03	3.643E+03	9.988E+03	5.408E+03	1.274E+04	2.000E+03	1.344E+04	1.262E+04	2.695E+03
OD 1/M	15.5	9.54	22.5	13.8	14.5	4.90	9.90	17.5	6.52
CT GM/M3	1.401E+03	763.	2.492E+03	1.883E+03	2.099E+03	554.	1.516E+03	2.434E+03	669.

TIME = 1600.0 SECONDS.

U. TEMP	308.4	303.3	347.4	310.0	693.8	324.6	1050.5	570.8	329.0
L. TEMP	308.7	306.7	317.9	311.4	337.5	308.0	957.4	433.9	308.9
UL. VOLUM	7.2	26.8	7.9	1.3	25.4	55.7	23.0	23.0	34.6
UL. THICK	0.5	1.0	0.3	0.4	2.8	2.4	2.4	2.4	2.4
CE. TEMP	303.1	300.8	323.5	305.6	542.4	312.4	939.7	457.5	313.6
UW. TEMP	302.1	300.6	316.5	304.0	491.3	309.1	849.6	423.2	309.9
LW. TEMP	301.4	300.7	306.4	301.9	360.3	305.2	783.7	394.0	305.5
FL. TEMP	301.1	300.3	308.4	301.2	377.1	308.0	936.4	433.8	308.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.965E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.950E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.529E+02	0.000E+00	0.000E+00
QSRW	-2.995E-03	1.054E-03	-5.104E-02	-6.473E-03	3.476E-01	1.943E-05	2.256E+00	2.394E-01	2.842E-03
	4.719E-03	1.175E-03	4.520E-02	4.183E-03	8.184E-01	3.852E-02	3.299E+00	8.492E-01	4.635E-02
QSCW	2.266E-02	8.411E-03	1.585E-01	1.795E-02	1.181E+00	6.694E-02	5.688E-01	9.161E-01	9.181E-02
	2.134E-03	1.679E-03	2.786E-03	3.131E-03	-3.071E-01	8.866E-07	3.717E-03	6.950E-06	4.573E-05

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	5.654E+04	1.019E+05	2.356E+04	8.587E+04	8.110E+03	1.681E+05	0.000E+00	8.163E+03	1.523E+05
CO2	PPM	2.259E+05	1.373E+05	3.478E+05	1.798E+05	4.397E+05	7.646E+04	4.609E+05	4.375E+05	1.042E+05
CO	PPM	6.657E+03	4.046E+03	1.025E+04	5.296E+03	1.296E+04	2.253E+03	1.358E+04	1.289E+04	3.069E+03
OD	1/M	17.2	10.6	23.4	13.6	14.8	5.52	10.3	17.9	7.41
CT	GM/M3	1.790E+03	1.004E+03	3.038E+03	2.203E+03	2.448E+03	678.	1.756E+03	2.857E+03	835.

TIME = 1700.0 SECONDS.

U. TEMP	307.0	303.0	341.3	307.6	684.3	324.7	1015.6	567.5	329.4
L. TEMP	310.2	308.4	320.1	313.2	340.6	308.8	950.4	439.8	309.6
UL. VOLUM	6.3	29.0	7.6	1.3	25.4	55.7	23.0	23.0	34.6
UL. THICK	0.4	1.1	0.3	0.4	2.8	2.4	2.4	2.4	2.4
CE. TEMP	303.1	300.9	322.9	305.3	546.7	312.9	929.9	462.8	314.2
UW. TEMP	302.1	300.6	316.0	303.7	493.0	309.4	829.4	426.8	310.4
LW. TEMP	301.7	301.0	307.2	302.3	365.3	305.6	791.1	400.2	305.9
FL. TEMP	301.1	300.4	308.8	301.3	381.4	308.4	923.9	439.4	309.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.673E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.650E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.986E+02	0.000E+00	0.000E+00
QSRW	-2.708E-03	1.523E-03	-5.184E-02	-6.214E-03	2.503E-01	-3.345E-04	1.492E+00	2.126E-01	2.399E-03
	3.603E-03	4.058E-04	4.059E-02	3.226E-03	8.173E-01	3.895E-02	3.005E+00	8.313E-01	4.721E-02
QSCW	1.557E-02	6.800E-03	1.124E-01	7.481E-03	1.046E+00	6.488E-02	4.116E-01	8.257E-01	8.922E-02
	2.694E-03	2.285E-03	3.532E-03	3.845E-03	-3.165E-01	5.174E-05	5.074E-03	3.914E-05	6.903E-05

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	5.236E+04	9.720E+04	2.369E+04	8.617E+04	7.931E+03	1.644E+05	0.000E+00	7.997E+03	1.469E+05
CO2	PPM	2.420E+05	1.483E+05	3.556E+05	1.793E+05	4.420E+05	8.493E+04	4.606E+05	4.415E+05	1.166E+05
CO	PPM	7.131E+03	4.369E+03	1.048E+04	5.284E+03	1.302E+04	2.502E+03	1.357E+04	1.301E+04	3.436E+03
OD	1/M	18.5	11.5	24.4	13.7	15.1	6.12	10.6	18.2	8.29
CT	GM/M3	2.215E+03	1.267E+03	3.608E+03	2.529E+03	2.805E+03	817.	2.005E+03	3.287E+03	1.022E+03



TIME = 1800.0 SECONDS.

U. TEMP	305.4	302.5	333.9	306.8	671.5	324.8	973.7	562.1	329.5
L. TEMP	311.7	309.6	322.5	313.7	343.6	309.5	938.3	445.3	310.3
UL. VOLUM	5.4	31.0	7.3	1.0	25.3	55.7	23.0	23.0	34.6
UL. THICK	0.4	1.2	0.3	0.3	2.8	2.4	2.4	2.4	2.4
CE. TEMP	303.0	300.9	321.9	305.2	548.7	313.3	913.8	466.7	314.8
UW. TEMP	302.1	300.6	315.2	303.6	492.5	309.6	802.5	429.3	310.9
LW. TEMP	302.0	301.3	307.9	302.7	369.6	305.9	793.5	405.6	306.3
FL. TEMP	301.2	300.4	309.0	301.3	384.7	308.7	905.0	443.6	309.5
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.374E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.350E-02	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.443E+02	0.000E+00	0.000E+00
QSRW	-2.154E-03	1.955E-03	-5.151E-02	-5.911E-03	1.496E-01	-7.102E-04	7.767E-01	1.807E-01	1.903E-03
	2.323E-03	-5.428E-04	3.507E-02	2.505E-03	8.019E-01	3.926E-02	2.704E+00	8.063E-01	4.782E-02
QSCW	8.172E-03	4.785E-03	6.457E-02	4.865E-03	9.064E-01	6.247E-02	2.607E-01	7.311E-01	8.585E-02
	3.252E-03	2.730E-03	4.445E-03	4.015E-03	-3.175E-01	1.032E-04	6.963E-03	2.412E-04	1.111E-04

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	4.993E+04	9.404E+04	2.271E+04	8.227E+04	7.741E+03	1.608E+05	0.000E+00	7.812E+03	1.418E+05
CO2	PPM	2.520E+05	1.557E+05	3.628E+05	1.900E+05	4.402E+05	9.321E+04	4.562E+05	4.411E+05	1.286E+05
CO	PPM	7.426E+03	4.589E+03	1.069E+04	5.597E+03	1.297E+04	2.746E+03	1.344E+04	1.300E+04	3.790E+03
OD	1/M	19.3	12.1	25.4	14.5	15.4	6.72	11.0	18.4	9.14
CT	GM/M3	2.666E+03	1.548E+03	4.201E+03	2.864E+03	3.168E+03	969.	2.262E+03	3.723E+03	1.230E+03

TIME = 1900.0 SECONDS.

U. TEMP	303.8	302.1	323.0	303.8	652.2	324.7	914.2	553.2	329.5
L. TEMP	313.0	310.8	324.3	315.0	345.8	312.2	945.4	459.7	313.5
UL. VOLUM	4.7	31.8	7.1	1.0	25.0	55.7	23.0	23.0	34.6
UL. THICK	0.3	1.2	0.3	0.3	2.8	2.4	2.4	2.4	2.4
CE. TEMP	302.8	300.9	320.4	304.9	548.1	313.6	890.3	469.2	315.4
UW. TEMP	302.0	300.7	313.9	303.3	489.6	309.9	768.0	430.3	311.2
LW. TEMP	302.4	301.6	308.5	303.1	373.1	306.3	791.7	410.9	306.9
FL. TEMP	301.2	300.4	309.0	301.4	386.6	309.0	878.2	446.2	310.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.049E-02	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.667E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.750E+02	0.000E+00	0.000E+00
QSRW	-1.216E-03	2.418E-03	-5.095E-02	-5.987E-03	2.975E-02	-1.125E-03	-2.314E-02	1.405E-01	1.350E-03
	1.024E-03	-1.544E-03	2.785E-02	1.624E-03	7.596E-01	3.931E-02	2.269E+00	7.665E-01	4.800E-02
QSCW	2.192E-03	3.053E-03	8.538E-03	-1.733E-04	7.390E-01	5.936E-02	7.818E-02	6.221E-01	8.143E-02
	3.779E-03	3.199E-03	5.214E-03	4.540E-03	-3.138E-01	6.463E-01	1.774E-02	3.452E-03	7.707E-04

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	4.957E+04	9.253E+04	2.227E+04	8.778E+04	7.612E+04	1.572E+05	0.000E+00	7.654E+03	1.368E+05
CO2 PPM	2.541E+05	1.594E+05	3.652E+05	1.735E+05	4.342E+05	1.012E+05	4.470E+05	4.369E+05	1.401E+05
CO PPM	7.488E+03	4.696E+03	1.076E+04	5.111E+03	1.279E+04	2.982E+03	1.317E+04	1.287E+04	4.127E+03
OD 1/M	19.6	12.4	26.5	13.4	15.6	7.30	11.4	18.5	9.95
CT GM/M3	3.130E+03	1.839E+03	4.820E+03	3.201E+03	3.536E+03	1.136E+03	2.528E+03	4.162E+03	1.458E+03



TIME = 2000.0 SECONDS.

U. TEMP	303.0	301.7	318.2	302.7	622.4	324.4	827.0	537.9	329.1
L. TEMP	313.9	311.6	325.3	315.7	346.7	317.3	937.2	477.2	319.0
UL. VOLUM	4.6	31.9	7.0	1.0	22.9	55.6	23.0	23.0	34.5
UL. THICK	0.3	1.2	0.3	0.3	2.5	2.4	2.4	2.4	2.4
CE. TEMP	302.8	300.9	319.1	304.8	542.9	313.9	856.8	469.3	315.8
UW. TEMP	301.9	300.7	312.6	303.2	482.6	310.1	721.1	429.3	311.5
LW. TEMP	302.8	301.9	309.1	303.4	374.4	307.1	783.6	416.4	307.8
FL. TEMP	301.2	300.4	309.0	301.5	385.3	309.4	840.1	446.6	310.4
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.514E-03	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.000E-03	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.050E+01	0.000E+00	0.000E+00
QSRW	9.034E-05	2.953E-03	-4.733E-02	-5.155E-03	-1.348E-01	-1.540E-03	-8.794E-01	8.733E-02	7.268E-04
	7.573E-05	-2.495E-03	2.360E-02	1.065E-03	6.418E-01	3.872E-02	1.797E+00	6.979E-01	4.735E-02
QSCW	3.786E-04	1.891E-03	-1.299E-04	-3.845E-04	5.294E-01	5.507E-02	-6.621E-03	4.818E-01	7.515E-02
	4.151E-03	3.541E-03	5.663E-03	4.838E-03	-2.913E-01	2.194E-03	2.937E-02	1.005E-02	2.457E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	5.032E+04	9.215E+04	2.227E+04	9.114E+04	7.559E+03	1.538E+05	0.000E+00	7.571E+03	1.320E+05
CO2	PPM	2.525E+05	1.603E+05	3.652E+05	1.634E+05	4.222E+05	1.088E+05	4.308E+05	4.275E+05	1.508E+05
CO	PPM	7.439E+03	4.723E+03	1.076E+04	4.815E+03	1.244E+04	3.205E+03	1.269E+04	1.260E+04	4.442E+03
OD	1/M	19.5	12.4	26.9	12.6	15.9	7.85	12.2	18.6	10.7
CT	GM/M3	3.596E+03	2.134E+03	5.456E+03	3.508E+03	3.911E+03	1.317E+03	2.809E+03	4.604E+03	1.704E+03



INPUT FAST FILE : SYS:OFF1.DMP/G  
INPUT EXITT FILE : SCENEGT.EVA  
TENABS OUTPUT FILE: SCENEGT.TEN

OCCUPANT 1	ROOM NUMBER	ENTER TIME (S)
	2	0
	10	246

OCCUPANT 2	ROOM NUMBER	ENTER TIME (S)
	1	0
	3	213
	5	223
	5	226
	7	228
	5	232
	5	235
	3	236
	4	238
	2	239
	10	244

OCCUPANT 3	ROOM NUMBER	ENTER TIME (S)
	1	0
	3	213
	5	223
	5	226
	7	228
	5	232
	9	237
	5	240
	5	244
	3	245
	10	246

OCCUPANT 4	ROOM NUMBER	ENTER TIME (S)
	9	0
	5	242
	5	246
	3	248
	10	248

FACTORS	INCAPACITATION LEVEL	LETHAL LEVEL
FED	0.5	1.0
CT (G-MIN/M3)	450.0	900.0
TEMP (C)	65.0	100.0

PERSON 1	TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
	4.	OUT	ESCAPE		27.0	0.0	0.00	0.
	33.	OUT	FINAL TIME		27.0	0.0	0.00	0.

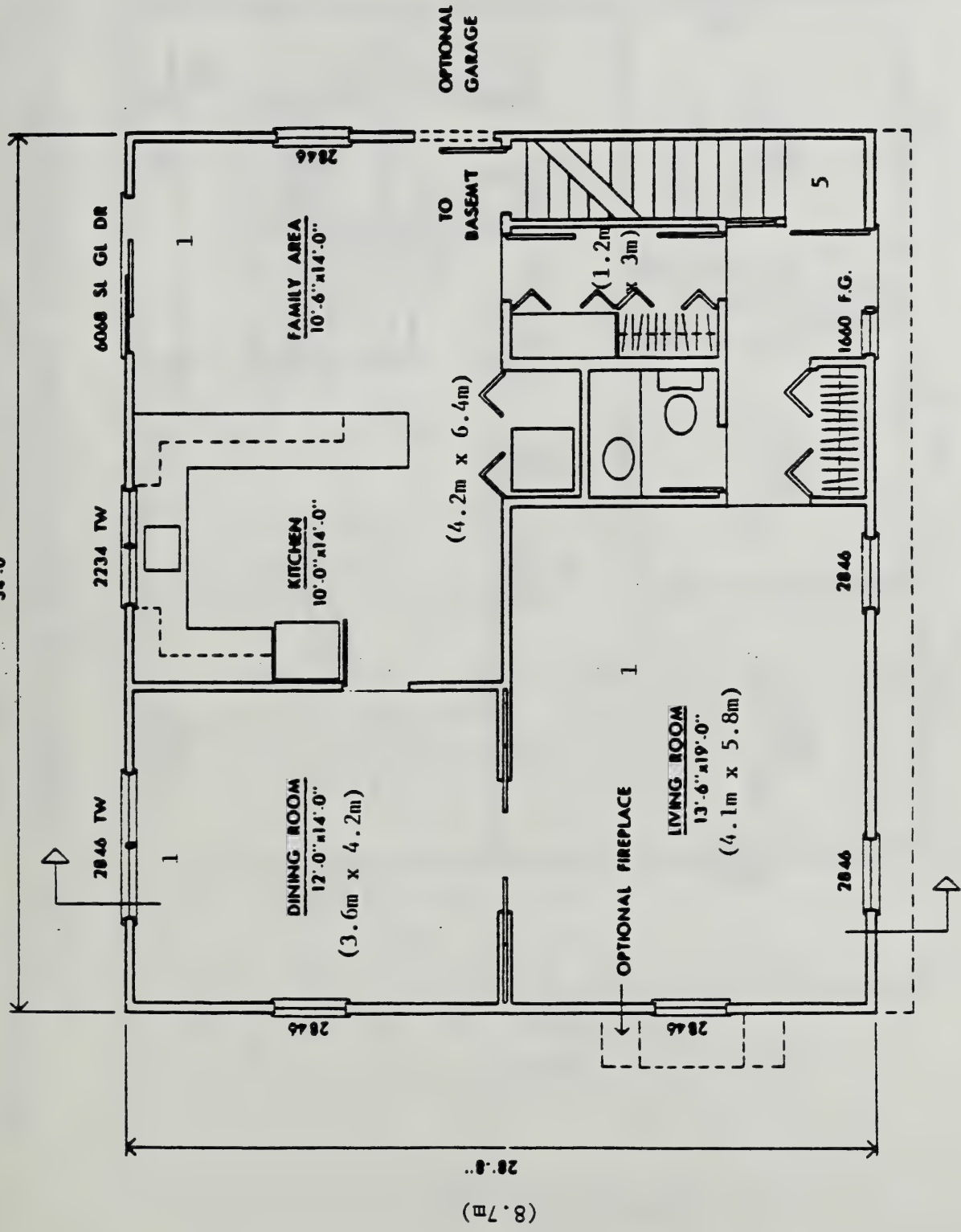
PERSON 2							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
33.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 3							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
33.	OUT	FINAL TIME		27.0	0.0	0.00	0.

PERSON 4							
TIME (MIN)	ROOM	CONDITION	CAUSE	TEMP (C)	FLUX (KW-MIN/M2)	FED	CT (G-MIN/M3)
4.	OUT	ESCAPE		27.0	0.0	0.00	0.
33.	OUT	FINAL TIME		27.0	0.0	0.00	0.

(10.4m)

34'-0"



LOWER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE

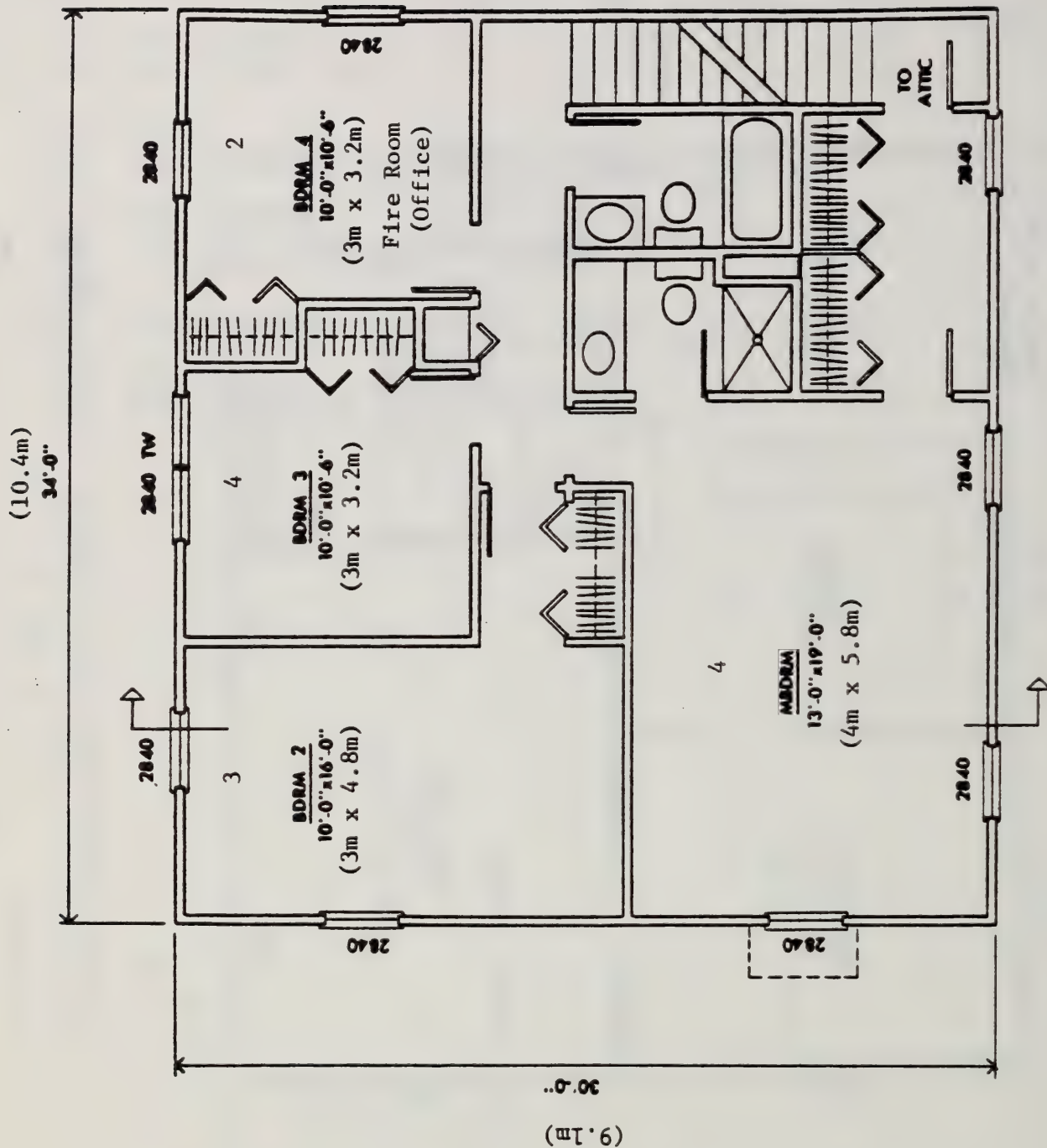
AUG. 10, 1977



0485

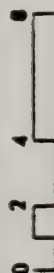
G.1 - Floor Plan for FIRE #8  
(5 Compartments)





G.2 - Floor Plan for FIRE #8  
(5 Compartments)

UPPER FLOOR PLAN OF A TYPICAL 2-STORY HOUSE



AUG. 10, 1977

NBS

VERSN 17 TWO STORY BUILDING ,OFFICE  
 TIMES 2000 100 0 0 0 0  
 NROOM 5  
 NMXOP 1  
 TAMB 300  
 HI/F 0.0 2.7 2.7 2.7 0.0  
 WIDTH 10. 3.2 3.0 4.0 1.0  
 DEPTH 6.4 3.0 4.8 8.2 9.0  
 HEIGH 2.4 2.4 2.4 2.4 4.9  
 HVENT 1 5 1.1 2.1 0.0  
 HVENT 2 5 1.1 4.8 2.7  
 HVENT 3 5 .01 4.80 2.7  
 HVENT 4 5 2.2 4.8 2.7  
 HVENT 1 6 1.1 0.2 0.0  
 CEILI  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 WALLS  
 COND .00018 .00018 .00018 .00018 .00018  
 SPHT .9 .9 .9 .9 .9  
 DNSTY 790 790 790 790 790  
 THICK .016 .016 .016 .016 .016  
 EMISS .9 .9 .9 .9 .9  
 FLOOR  
 COND .0001 .0001 .0001 .0001 .0001  
 SPHT 1.4 1.4 1.4 1.4 1.4  
 DNSTY 300 300 300 300 300  
 THICK .0127 .0127 .0127 .0127 .0127  
 EMISS 1.0 1.0 1.0 1.0 1.0  
 LFBO 2  
 LFBT 1  
 LFPOS 1  
 CHEMI 1.0 0.0 0.0 0.0 0.0 0.0 18100 300  
 LFMAX 8  
 FTIME 240 110 25 225 250 600 400 150  
 FMASS 0.0 .0001 .0008 .018 .007 .04 .024 .012 .005  
 FHIGH 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0  
 CO .03 .03 .03 .03 .03 .03 .03 .03 .03  
 O2 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
 CO2 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6  
 OD .02 .02 .02 .02 .02 .02 .02 .02 .02  
 CT 1. 1. 1. 1. 1. 1. 1. 1. 1.

H - INPUT FOR FAST (5 COMPARTMENTS)



**I. OUTPUT - COMPUTER FILES FOR FIRE #8 (5 Compartments)**

## TWO STORY BUILDING ,OFFICE

TOTAL COMPARTMENTS = 5  
 MAXIMUM OPENINGS PER PAIR = 1

## FLOOR PLAN

WIDTH	10.0	3.2	3.0	4.0	1.0
DEPTH	6.4	3.0	4.8	8.2	9.0
HEIGHT	2.4	2.4	2.4	2.4	4.9
AREA	64.0	9.6	14.4	32.8	9.0
VOLUME	153.6	23.0	34.6	78.7	44.1
CEILING	2.4	5.1	5.1	5.1	4.9
FLOOR	0.0	2.7	2.7	2.7	0.0

## CONNECTIONS

1 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	1.10	1.10
	HH=	0.00	0.00	0.00	0.00	2.10	0.20	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.10	0.20	0.00
	HLP=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 ( 1 )	BW=	0.00	0.00	0.00	0.00	1.10	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00
3 ( 1 )	BW=	0.00	0.00	0.00	0.00	0.01	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00
4 ( 1 )	BW=	0.00	0.00	0.00	0.00	2.20	0.00	0.00
	HH=	0.00	0.00	0.00	0.00	2.10	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	0.00	0.00	0.00	0.00	4.80	0.00	0.00
	HLP=	0.00	0.00	0.00	0.00	2.70	0.00	0.00
5 ( 1 )	BW=	1.10	1.10	0.01	2.20	0.00	0.00	0.00
	HH=	2.10	2.10	0.00	2.10	0.00	0.00	0.00
	HL=	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	HHP=	2.10	4.80	2.70	4.80	0.00	0.00	0.00
	HLP=	0.00	2.70	2.70	2.70	0.00	0.00	0.00

## CEILING

COND =	1.800E-04	1.800E-04	1.800E-04	1.800E-04	1.800E-04
SPHT =	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01
DNSTY=	7.900E+02	7.900E+02	7.900E+02	7.900E+02	7.900E+02
THICK=	1.600E-02	1.600E-02	1.600E-02	1.600E-02	1.600E-02
EMISS=	9.000E-01	9.000E-01	9.000E-01	9.000E-01	9.000E-01

## FLOOR

COND =	1.000E-04	1.000E-04	1.000E-04	1.000E-04	1.000E-04
SPHT =	1.400E+00	1.400E+00	1.400E+00	1.400E+00	1.400E+00
DNSTY=	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02



THICK= 1.270E-02 1.270E-02 1.270E-02 1.270E-02 1.270E-02  
EMISS= 1.000E+00 1.000E+00 1.000E+00 1.000E+00 1.000E+00

UPPER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

LOWER WALL

COND = 1.800E-04 1.800E-04 1.800E-04 1.800E-04 1.800E-04  
SPHT = 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01  
DNSTY= 7.900E+02 7.900E+02 7.900E+02 7.900E+02 7.900E+02  
THICK= 1.600E-02 1.600E-02 1.600E-02 1.600E-02 1.600E-02  
EMISS= 9.000E-01 9.000E-01 9.000E-01 9.000E-01 9.000E-01

FIRE ROOM NUMBER IS 2

TIME STEP IS 1.00 SECONDS

PRINT EVERY 100 TIME STEPS

NUMBER OF FIRE INTERVALS = 8

TOTAL TIME INTERVAL = 2000

FIRE SOURCE = 1

FIRE TYPE = SPECIFIED

INITIAL FUEL TEMPERATURE (K) = 300.

AMBIENT AIR TEMPERATURE (K) = 300.

AMBIENT REFERENCE PRESSURE (KPA) = 101.30

EFFECTIVE HEAT OF COMBUSTION (KJ/KG) = 18100.

FMASS= 0.00E+00 1.00E-04 8.00E-04 1.80E-02 7.00E-03 4.00E-02 2.40E-02 1.20E-02 5.00E-03  
FHIGH= 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00  
O2= -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4 -1.4  
CO2= 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6  
CO= 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02 3.00E-02  
OD= 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02 2.00E-02  
CT= 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0  
FTIME= 2.40E+02 1.10E+02 25. 2.25E+02 2.50E+02 4.00E+02 1.50E+02

TIME = 0.0 SECONDS.

U. TEMP	300.0	300.0	300.0	300.0	300.0
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	0.0	0.0	0.0	0.0
UL. THICK	0.0	0.0	0.0	0.0	0.0
CE. TEMP	300.0	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSCW	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

## UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.070E+05	2.070E+05	2.070E+05	2.070E+05
CO2	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO	PPM	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OD	1/M	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CT	GM/M3	/	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIME = 100.0 SECONDS.

U. TEMP	300.0	301.7	300.0	300.0	300.0	300.1
L. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	15.1	0.0	0.0	0.0	2.3
UL. THICK	0.0	1.6	0.0	0.0	0.0	0.3
CE. TEMP	300.0	300.1	300.0	300.0	300.0	300.0
UW. TEMP	300.0	300.1	300.0	300.0	300.0	300.0
LW. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
FL. TEMP	300.0	300.0	300.0	300.0	300.0	300.0
PLUME	0.000E+00	8.081E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.167E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	7.542E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	4.174E-10	8.356E-04	-8.344E-07	-8.230E-07	4.194E-05	
	-1.068E-10	7.030E-04	2.320E-07	2.953E-07	6.123E-06	
QSCW	2.622E-12	4.725E-03	-5.553E-10	-5.535E-10	9.552E-05	
	3.901E-10	-2.411E-05	-1.021E-05	-1.018E-05	-1.391E-08	

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	2.068E+05	2.070E+05	2.070E+05	2.069E+05
CO2	PPM	0.000E+00	124.	0.000E+00	2.646E-02	10.4
CO	PPM	0.000E+00	3.66	0.000E+00	7.798E-04	0.306
OD	1/M	0.000E+00	9.629E-03	0.000E+00	2.065E-06	8.102E-04
CT	GM/M3	0.000E+00	9.759E-02	0.000E+00	3.052E-06	2.992E-02

TIME = 200.0 SECONDS.

U. TEMP	300.0	304.8	300.0	300.0	301.0
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	17.1	0.0	0.1	9.1
UL. THICK	0.0	1.8	0.0	0.0	1.0
CE. TEMP	300.0	300.4	300.0	300.0	300.0
UW. TEMP	300.0	300.3	300.0	300.0	300.0
LW. TEMP	300.0	300.1	300.0	300.0	300.0
FL. TEMP	300.0	300.1	300.0	300.0	300.0
PLUME	0.000E+00	5.469E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	8.333E-05	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.508E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	7.626E-10	2.129E-03	-1.081E-06	1.841E-05	4.835E-04
	-3.829E-10	2.746E-03	3.007E-07	1.026E-05	8.701E-05
QSCW	4.659E-14	1.803E-02	-7.788E-10	3.270E-05	2.269E-03
	5.664E-10	-1.097E-04	-9.292E-06	-9.497E-06	-7.024E-07

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	2.070E+05	2.065E+05	2.070E+05	2.069E+05
CO2	PPM	/	0.000E+00	392.	0.000E+00	100.
CO	PPM	/	0.000E+00	11.5	0.000E+00	2.95
OD	1/M	/	0.000E+00	3.009E-02	0.000E+00	7.798E-03
CT	GM/M3	/	0.000E+00	0.552	0.000E+00	0.108

TIME = 300.0 SECONDS.

U. TEMP	300.0	315.7	300.0	300.2	303.8
L. TEMP	300.0	300.0	300.0	300.0	300.0
UL. VOLUM	0.0	16.7	0.0	14.7	14.8
UL. THICK	0.0	1.7	0.0	0.4	1.6
CE. TEMP	300.0	301.6	300.0	300.0	300.2
UW. TEMP	300.0	301.1	300.0	300.0	300.2
LW. TEMP	300.0	300.2	300.0	300.0	300.0
FL. TEMP	300.0	300.3	300.0	300.0	300.0
PLUME	0.000E+00	9.522E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	4.818E-04	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	8.721E+00	0.000E+00	0.000E+00	0.000E+00
QSRW	1.675E-09	6.940E-03	-1.220E-06	8.568E-05	1.881E-03
	-5.956E-10	9.675E-03	3.393E-07	5.541E-05	4.568E-04
QSCW	8.579E-12	8.403E-02	-9.193E-10	2.472E-04	1.357E-02
	1.292E-09	-4.743E-04	-8.500E-06	-9.396E-06	-7.607E-06

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	2.070E+05	2.053E+05	2.070E+05	2.070E+05	2.064E+05
CO2 PPM	0.000E+00	1.264E+03	0.000E+00	28.7	422.
CO PPM	0.000E+00	37.2	0.000E+00	0.846	12.4
OD 1/M	0.000E+00	9.369E-02	0.000E+00	2.240E-03	3.250E-02
CT GM/M3	0.000E+00	1.78	0.000E+00	5.877E-02	0.504



TIME = 400.0 SECONDS.

U. TEMP	300.0	558.6	300.0	348.7	419.1
L. TEMP	300.0	301.3	300.0	300.0	300.0
UL. VOLUM	0.0	20.5	0.0	71.2	18.7
UL. THICK	0.0	2.1	0.0	2.2	2.1
CE. TEMP	300.0	343.3	300.0	303.9	316.0
UW. TEMP	300.0	330.1	300.0	302.6	310.9
LW. TEMP	300.0	306.6	300.0	300.4	300.4
FL. TEMP	300.0	310.9	300.0	300.7	300.6
PLUME	0.000E+00	4.299E-01	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.678E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	3.037E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	3.516E-08	3.958E-01	-1.313E-06	2.754E-02	9.922E-02
	-1.752E-08	5.702E-01	3.651E-07	4.881E-02	3.131E-02
QSCW	1.383E-11	2.286E+00	-1.014E-09	3.724E-01	1.017E+00
	5.134E-08	-4.882E-02	-7.795E-06	-1.381E-03	-1.246E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	2.070E+05	1.781E+05	2.070E+05	2.006E+05	1.915E+05
CO2	PPM	0.000E+00	2.089E+04	0.000E+00	4.639E+03	1.114E+04
CO	PPM	0.000E+00	615.	0.000E+00	137.	328.
OD	1/M	0.000E+00	0.875	0.000E+00	0.311	0.622
CT	GM/M3	0.000E+00	10.1	0.000E+00	1.56	5.35

TIME = 500.0 SECONDS.

U. TEMP	309.5	597.8	300.0	387.9	445.0
L. TEMP	300.0	440.2	300.0	306.4	300.9
UL. VOLUM	5.4	23.0	0.0	78.3	26.0
UL. THICK	0.1	2.4	0.0	2.4	2.9
CE. TEMP	301.0	390.7	300.0	318.1	337.2
UW. TEMP	300.6	367.6	300.0	312.6	326.6
LW. TEMP	300.1	341.2	300.0	303.6	301.8
FL. TEMP	300.1	354.7	300.0	306.2	303.0
PLUME	0.000E+00	1.189E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.189E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.152E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	1.081E-03	4.796E-01	-1.382E-06	4.154E-02	1.151E-01
	4.844E-03	1.058E+00	3.844E-07	1.544E-01	7.556E-02
QSCW	4.346E-02	2.047E+00	-1.086E-09	6.276E-01	1.031E+00
	-1.547E-04	3.973E-02	-7.160E-06	2.709E-05	-6.808E-03

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.978E+05	1.558E+05	2.070E+05	1.839E+05	1.734E+05
CO2 PPM	6.743E+03	3.865E+04	0.000E+00	1.695E+04	2.501E+04
CO PPM	199.	1.139E+03	0.000E+00	499.	737.
OD 1/M	0.510	1.51	0.000E+00	1.02	1.32
CT GM/M3	5.26	39.6	0.000E+00	17.5	28.6

TIME = 600.0 SECONDS.

U. TEMP	301.1	536.0	300.0	384.3	428.3
L. TEMP	300.0	409.1	300.0	314.4	301.9
UL. VOLUM	6.8	23.0	0.0	78.4	23.3
UL. THICK	0.1	2.4	0.0	2.4	2.6
CE. TEMP	300.6	396.9	300.0	324.4	344.0
UW. TEMP	300.4	374.1	300.0	317.4	332.3
LW. TEMP	300.1	352.1	300.0	306.5	302.8
FL. TEMP	300.1	367.3	300.0	310.5	304.5
PLUME	0.000E+00	7.000E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	7.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.267E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.633E-03	2.349E-01	-1.437E-06	2.663E-02	6.828E-02
	1.223E-03	7.240E-01	3.996E-07	1.626E-01	6.894E-02
QSCW	1.081E-03	1.273E+00	-1.143E-09	5.116E-01	7.538E-01
	-1.401E-04	1.717E-02	-6.585E-06	8.897E-04	-8.747E-03

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.977E+05	1.503E+05	2.070E+05	1.710E+05	1.627E+05
CO2	PPM	/	6.862E+03	4.294E+04	0.000E+00	2.691E+04	3.341E+04
CO	PPM	/	202.	1.265E+03	0.000E+00	793.	984.
OD	1/M	/	0.534	1.88	0.000E+00	1.64	1.83
CT	GM/M3	/	17.9	80.2	0.000E+00	49.6	66.5

TIME = 700.0 SECONDS.

U. TEMP	331.0	717.8	300.0	406.8	485.7
L. TEMP	300.1	487.4	300.0	315.8	302.8
UL. VOLUM	19.2	23.0	0.0	78.7	27.1
UL. THICK	0.3	2.4	0.0	2.4	3.0
CE. TEMP	303.1	439.3	300.0	330.7	357.5
UW. TEMP	302.0	408.2	300.0	322.1	342.6
LW. TEMP	300.3	380.7	300.0	308.9	304.2
FL. TEMP	300.5	407.1	300.0	314.5	306.8
PLUME	0.000E+00	2.020E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.020E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	3.656E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	7.135E-03	1.128E+00	-1.481E-06	4.563E-02	1.689E-01
QSCW	1.764E-02	1.950E+00	4.117E-07	2.134E-01	1.268E-01
	2.029E-01	2.704E+00	-1.189E-09	6.833E-01	1.228E+00
	-5.726E-04	3.703E-02	-6.064E-06	2.012E-04	-1.542E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	1.848E+05	1.206E+05	2.070E+05	1.591E+05	1.465E+05
CO2	PPM	1.746E+04	6.788E+04	0.000E+00	3.878E+04	4.831E+04
CO	PPM	514.	2.000E+03	0.000E+00	1.143E+03	1.423E+03
OD	1/M	1.24	2.21	0.000E+00	2.23	2.33
CT	GM/M3	34.6	128.	0.000E+00	95.6	115.

TIME = 800.0 SECONDS.

U. TEMP	347.7	942.3	300.0	462.7	574.9
L. TEMP	300.4	600.3	300.0	330.0	305.0
UL. VOLUM	38.0	23.0	0.0	78.6	27.1
UL. THICK	0.6	2.4	0.0	2.4	3.0
CE. TEMP	309.0	553.7	300.0	347.3	388.5
UW. TEMP	306.0	506.9	300.0	334.5	366.6
LW. TEMP	301.0	465.4	300.0	315.1	307.7
FL. TEMP	301.7	544.2	300.0	324.0	312.2
PLUME	0.000E+00	3.340E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.340E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.045E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.066E-03	3.709E+00	-1.515E-06	1.073E-01	3.915E-01
	4.028E-02	4.656E+00	4.214E-07	3.849E-01	2.453E-01
QSCW	3.044E-01	3.509E+00	-1.227E-09	1.100E+00	1.821E+00
	-3.590E-03	2.021E-02	-5.591E-06	1.516E-03	-3.411E-02

# UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.609E+05	5.319E+04	2.070E+05	1.259E+05	1.027E+05
CO2 PPM	3.628E+04	1.169E+05	0.000E+00	6.357E+04	8.058E+04
CO PPM	1.069E+03	3.443E+03	0.000E+00	1.873E+03	2.374E+03
OD 1/M	2.44	2.90	0.000E+00	3.22	3.28
CT GM/M3	79.2	189.	0.000E+00	159.	181.

THE FIRE BECAME VENTILATION CONTROLLED AT 860. SECONDS  
 CAUTION SHOULD BE EXERCISED IN THE USE OF MODEL RESULTS BEYOND THIS POINT.  
 SEE THE HAZARD I REPORT VOL. 1, SECTION 6.8.6 ITEM 5



TIME = 900.0 SECONDS.

U. TEMP	345.2	1061.8	300.0	502.2	628.9
L. TEMP	300.9	705.6	300.0	345.1	308.4
UL. VOLUM	48.4	23.0	0.0	78.6	27.3
UL. THICK	0.8	2.4	0.0	2.4	3.0
GE. TEMP	311.8	694.9	300.0	366.7	421.7
UW. TEMP	308.1	640.2	300.0	349.3	393.4
LW. TEMP	301.7	561.9	300.0	324.0	313.2
FL. TEMP	302.7	706.9	300.0	338.1	320.4
PLUME	0.000E+00	3.867E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.867E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.999E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.073E-02	5.858E+00	-1.543E-06	1.583E-01	5.531E-01
	4.615E-02	5.518E+00	4.290E-07	5.538E-01	3.773E-01
QSCW	2.509E-01	2.942E+00	-1.256E-09	1.293E+00	1.970E+00
	-5.402E-03	-2.487E-04	-5.161E-06	1.813E-03	-6.708E-02

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.420E+05	0.000E+00	2.070E+05	7.139E+04	4.680E+04
CO2	PPM	/	5.059E+04	1.734E+05	0.000E+00	1.049E+05	1.275E+05
CO	PPM	/	1.491E+03	5.110E+03	0.000E+00	3.090E+03	3.756E+03
OD	1/M	/	3.43	3.82	0.000E+00	4.89	4.75
CT	GM/M3	/	150.	269.	0.000E+00	255.	276.

TIME = 1000.0 SECONDS.

U. TEMP	338.1	1072.9	300.0	514.5	641.8
L. TEMP	301.9	777.1	300.0	354.1	311.9
UL. VOLUM	53.3	23.0	0.0	78.7	26.9
UL. THICK	0.8	2.4	0.0	2.4	3.0
CE. TEMP	312.1	765.8	300.0	380.7	443.5
UW. TEMP	308.4	709.5	300.0	360.6	411.8
LW. TEMP	302.1	611.2	300.0	332.6	318.5
FL. TEMP	303.4	778.1	300.0	351.3	327.9
PLUME	0.000E+00	3.600E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.600E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.516E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.474E-02	5.620E+00	-1.563E-06	1.638E-01	5.455E-01
	4.214E-02	4.822E+00	4.347E-07	6.184E-01	4.418E-01
QSCW	1.812E-01	2.271E+00	-1.278E-09	1.245E+00	1.822E+00
	-4.332E-03	-4.446E-04	-4.769E-06	5.322E-04	-9.748E-02

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.300E+05	0.000E+00	2.070E+05	3.638E+04	2.407E+04
CO2 PPM	6.145E+04	2.117E+05	0.000E+00	1.481E+05	1.691E+05
CO PPM	1.810E+03	6.237E+03	0.000E+00	4.362E+03	4.983E+03
OD 1/M	4.26	4.62	0.000E+00	6.74	6.17
CT GM/M3	241.	370.	0.000E+00	394.	407.

TIME = 1100.0 SECONDS.

U.TEMP	334.8	1073.4	300.0	521.4	648.5
L.TEMP	303.1	837.5	300.0	365.7	315.1
UL.VOLUM	57.6	23.0	0.0	78.7	26.6
UL.THICK	0.9	2.4	0.0	2.4	3.0
CE.TEMP	312.3	810.8	300.0	391.6	459.7
UW.TEMP	308.6	753.5	300.0	369.5	425.7
LW.TEMP	302.4	646.8	300.0	340.3	323.5
FL.TEMP	304.0	821.0	300.0	362.9	334.5
PLUME	0.000E+00	3.333E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.333E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	6.033E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.521E-02	5.147E+00	-1.577E-06	1.642E-01	5.178E-01
	3.982E-02	4.315E+00	4.387E-07	6.482E-01	4.892E-01
QSCW	1.507E-01	1.826E+00	-1.294E-09	1.183E+00	1.688E+00
	-2.003E-03	3.049E-03	-4.411E-06	5.323E-04	-1.253E-01

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.205E+05	0.000E+00	2.070E+05	1.909E+04	1.284E+04
CO2	PPM	/	7.212E+04	2.447E+05	0.000E+00	1.870E+05	2.061E+05
CO	PPM	/	2.125E+03	7.209E+03	0.000E+00	5.509E+03	6.072E+03
OD	1/M	/	5.04	5.34	0.000E+00	8.40	7.44
CT	GM/M3	/	352.	488.	0.000E+00	574.	569.

TIME = 1200.0 SECONDS:

U. TEMP	332.0	1068.4	300.0	526.5	652.9
L. TEMP	304.7	859.1	300.0	376.1	318.2
UL. VOLUM	61.1	23.0	0.0	78.7	26.2
UL. THICK	1.0	2.4	0.0	2.4	2.9
CE. TEMP	312.4	841.8	300.0	400.9	473.2
UW. TEMP	308.7	782.3	300.0	377.2	436.9
LW. TEMP	302.7	673.9	300.0	347.6	328.4
FL. TEMP	304.6	849.2	300.0	373.2	340.6
PLUME	0.000E+00	3.067E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	3.067E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	5.551E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.547E-02	4.582E+00	-1.587E-06	1.632E-01	4.820E-01
	3.754E-02	3.957E+00	4.412E-07	6.656E-01	5.270E-01
QSCW	1.253E-01	1.494E+00	-1.304E-09	1.122E+00	1.568E+00
	1.416E-05	1.514E-03	-4.085E-06	5.234E-04	-1.506E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.132E+05	0.000E+00	2.070E+05	1.004E+04	6.612E+03
CO2 PPM	8.200E+04	2.747E+05	0.000E+00	2.223E+05	2.401E+05
CO PPM	2.416E+03	8.093E+03	0.000E+00	6.550E+03	7.073E+03
OD 1/M	5.78	6.02	0.000E+00	9.88	8.61
CT GM/M3	481.	624.	0.000E+00	792.	761.

TIME = 1300.0 SECONDS.

U. TEMP	329.2	1058.0	300.0	529.9	654.6
L. TEMP	306.7	901.1	300.0	385.8	321.3
UL. VOLUM	63.8	23.0	0.0	78.7	26.0
UL. THICK	1.0	2.4	0.0	2.4	2.9
CE. TEMP	312.5	862.6	300.0	409.1	484.5
UW. TEMP	308.8	799.1	300.0	383.9	446.1
LW. TEMP	303.1	700.4	300.0	354.5	333.1
FL. TEMP	305.0	867.2	300.0	382.5	346.3
PLUME	0.000E+00	2.800E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.800E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	5.068E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.575E-02	3.952E+00	-1.591E-06	1.590E-01	4.358E-01
	3.509E-02	3.669E+00	4.425E-07	6.748E-01	5.591E-01
QSCW	1.021E-01	1.227E+00	-1.309E-09	1.058E+00	1.450E+00
	2.902E-04	7.395E-03	-3.785E-06	6.157E-04	-1.724E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	1.078E+05	0.000E+00	2.070E+05	5.191E+03	3.338E+03
CO2 PPM	9.064E+04	3.014E+05	0.000E+00	2.545E+05	2.706E+05
CO PPM	2.671E+03	8.882E+03	0.000E+00	7.497E+03	7.974E+03
OD 1/M	6.45	6.67	0.000E+00	11.2	9.68
CT GM/M3	627.	775.	0.000E+00	1.044E+03	979.



TIME = 1400.0 SECONDS.

U. TEMP	326.9	1042.6	300.0	531.9	653.9
L. TEMP	309.0	913.7	300.0	394.2	324.6
UL. VOLUM	65.9	23.0	0.0	78.7	25.8
UL. THICK	1.0	2.4	0.0	2.4	2.9
CE. TEMP	312.5	875.2	300.0	416.4	494.0
UW. TEMP	308.8	806.1	300.0	389.8	453.5
LW. TEMP	303.5	720.7	300.0	361.1	337.8
FL. TEMP	305.4	876.8	300.0	390.8	351.6
PLUME	0.000E+00	2.533E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.533E-02	0.000E+00	0.000E+00	0.000E+00
OF	0.000E+00	4.585E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.579E-02	3.295E+00	-1.591E-06	1.514E-01	3.817E-01
	3.286E-02	3.428E+00	4.425E-07	6.780E-01	5.846E-01
QSCW	8.386E-02	1.004E+00	-1.309E-09	9.905E-01	1.332E+00
	7.733E-04	8.178E-03	-3.511E-06	6.506E-04	-1.899E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.036E+05	0.000E+00	2.070E+05	2.672E+03	1.704E+03
CO2	PPM	/	9.828E+04	3.248E+05	0.000E+00	2.830E+05	2.975E+05
CO	PPM	/	2.896E+03	9.570E+03	0.000E+00	8.340E+03	8.767E+03
OD	1/M	/	7.04	7.29	0.000E+00	12.5	10.7
CT	GM/M3	/	788.	941.	0.000E+00	1.327E+03	1.221E+03

TIME = 1500.0 SECONDS.

U. TEMP	324.7	1020.6	300.0	532.4	650.7
L. TEMP	311.5	916.9	300.0	401.4	327.6
UL. VOLUM	67.6	23.0	0.0	78.7	25.6
UL. THICK	1.1	2.4	0.0	2.4	2.8
CE. TEMP	312.4	880.1	300.0	422.9	501.7
UW. TEMP	308.8	803.9	300.0	394.8	459.0
LW. TEMP	304.0	736.3	300.0	367.2	342.2
FL. TEMP	305.8	878.8	300.0	397.9	356.4
PLUME	0.000E+00	2.250E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	2.250E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	4.072E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.581E-02	2.603E+00	-1.588E-06	1.402E-01	3.194E-01
	3.063E-02	3.178E+00	4.415E-07	6.762E-01	6.019E-01
QSCW	6.759E-02	8.023E-01	-1.305E-09	9.203E-01	1.212E+00
	1.432E-03	8.495E-03	-3.260E-06	6.480E-04	-2.048E-01

# UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	1.004E+05	0.000E+00	2.070E+05	1.387E+03	880
CO2	PPM	/	1.049E+05	3.446E+05	0.000E+00	3.080E+05	3.208E+05
CO	PPM	/	3.089E+03	1.015E+04	0.000E+00	9.075E+03	9.452E+03
OD	1/M	/	7.56	7.90	0.000E+00	13.5	11.5
CT	GM/M3	/	962.	1.122E+03	0.000E+00	1.637E+03	1.486E+03

TIME = 1600.0 SECONDS.

U. TEMP	322.1	990.5	300.0	530.9	644.2
L. TEMP	314.1	904.9	300.0	407.1	330.1
UL. VOLUM	68.6	23.0	0.0	78.7	25.5
UL. THICK	1.1	2.4	0.0	2.4	2.8
CE. TEMP	312.3	876.8	300.0	428.3	507.3
UW. TEMP	308.6	792.6	300.0	398.9	462.6
LW. TEMP	304.6	745.6	300.0	372.8	346.4
FL. TEMP	306.1	872.7	300.0	403.9	360.3
PLUME	0.000E+00	1.950E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.950E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	3.529E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.586E-02	1.890E+00	-1.581E-06	1.243E-01	2.482E-01
	2.795E-02	2.905E+00	4.396E-07	6.673E-01	6.090E-01
QSCW	5.061E-02	6.144E-01	-1.298E-09	8.434E-01	1.086E+00
	2.276E-03	6.838E-03	-3.029E-06	5.665E-04	-2.179E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	9.823E+04	0.000E+00	2.070E+05	728.	460.
CO2	PPM	1.099E+05	3.606E+05	0.000E+00	3.292E+05	3.403E+05
CO	PPM	3.237E+03	1.062E+04	0.000E+00	9.700E+03	1.003E+04
OD	1/M	7.99	8.52	0.000E+00	14.5	12.4
CT	CM/M3	1.148E+03	1.318E+03	0.000E+00	1.971E+03	1.771E+03

TIME = 1700.0 SECONDS.

U. TEMP	319.3	954.1	300.0	527.7	634.9
L. TEMP	316.9	881.6	300.0	411.4	332.3
UL. VOLUM	69.0	23.0	0.0	78.7	25.4
UL. THICK	1.1	2.4	0.0	2.4	2.8
CE. TEMP	312.0	867.0	300.0	432.7	511.0
UW. TEMP	308.4	774.0	300.0	402.0	464.2
LW. TEMP	305.2	749.1	300.0	377.8	350.1
FL. TEMP	306.3	859.9	300.0	408.7	363.5
PLUME	0.000E+00	1.650E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.650E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.986E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.582E-02	1.215E+00	-1.571E-06	1.048E-01	1.727E-01
	2.497E-02	2.633E+00	4.369E-07	6.525E-01	6.059E-01
QSCW	3.435E-02	4.393E-01	-1.287E-09	7.625E-01	9.563E-01
	3.246E-03	4.074E-03	-2.816E-06	4.313E-04	-2.263E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.685E+04	0.000E+00	2.070E+05	387.	243.
CO2 PPM	1.132E+05	3.733E+05	0.000E+00	3.468E+05	3.563E+05
CO PPM	3.335E+03	1.100E+04	0.000E+00	1.022E+04	1.050E+04
OD 1/M	8.30	9.16	0.000E+00	15.4	13.1
CT GM/M3	1.342E+03	1.528E+03	0.000E+00	2.327E+03	2.075E+03

TIME = 1800.0 SECONDS.

U. TEMP	316.2	911.0	300.0	522.6	622.5
L. TEMP	319.5	884.1	300.0	415.9	334.2
UL. VOLUM	68.7	23.0	0.0	78.7	25.2
UL. THICK	1.1	2.4	0.0	2.4	2.8
CE. TEMP	311.6	851.6	300.0	436.0	512.8
UW. TEMP	308.1	749.5	300.0	404.1	464.0
LW. TEMP	305.9	749.6	300.0	382.2	353.3
FL. TEMP	306.4	841.5	300.0	412.4	365.8
PLUME	0.000E+00	1.350E-02	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	1.350E-02	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	2.443E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.578E-02	5.921E-01	-1.559E-06	8.187E-02	9.462E-02
	2.165E-02	2.349E+00	4.334E-07	6.314E-01	5.926E-01
QSCW	1.854E-02	2.705E-01	-1.274E-09	6.770E-01	8.216E-01
	4.287E-03	1.008E-02	-2.621E-06	6.189E-04	-2.297E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	9.632E+04	0.000E+00	2.070E+05	210.	131.
CO2	PPM	1.146E+05	3.828E+05	0.000E+00	3.612E+05	3.691E+05
CO	PPM	3.376E+03	1.128E+04	0.000E+00	1.064E+04	1.087E+04
OD	1/M	8.49	9.84	0.000E+00	16.2	13.9
CT	GM/M3	1.542E+03	1.754E+03	0.000E+00	2.703E+03	2.397E+03



TIME = 1900.0 SECONDS.

U. TEMP	313.5	851.5	300.0	514.9	605.0
L. TEMP	321.8	873.4	300.0	429.3	335.6
UL. VOLUM	68.1	23.0	0.0	78.6	24.4
UL. THICK	1.1	2.4	0.0	2.4	2.7
CE. TEMP	311.2	829.9	300.0	438.0	512.2
UW. TEMP	307.7	718.3	300.0	405.1	461.7
LW. TEMP	306.5	746.6	300.0	386.7	355.7
FL. TEMP	306.5	816.4	300.0	414.8	366.9
PLUME	0.000E+00	9.826E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	9.667E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	1.750E+02	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.535E-02	-8.243E-02	-1.544E-06	5.467E-02	5.522E-05
	1.850E-02	1.968E+00	4.294E-07	5.999E-01	5.498E-01
QSCW	7.549E-03	7.218E-02	-1.258E-09	5.812E-01	6.665E-01
	5.261E-03	1.491E-02	-2.440E-06	4.018E-03	-2.259E-01

UPPER LAYER SPECIES CONCENTRATION

O2	PPM	/	9.631E+04	0.000E+00	2.070E+05	117.	74.1
CO2	PPM	/	1.146E+05	3.880E+05	0.000E+00	3.721E+05	3.781E+05
CO	PPM	/	3.377E+03	1.143E+04	0.000E+00	1.096E+04	1.114E+04
OD	1/M	/	8.56	10.7	0.000E+00	16.9	14.6
CT	CM/M3	/	1.745E+03	1.998E+03	0.000E+00	3.098E+03	2.736E+03

TIME = 2000.0 SECONDS.

U. TEMP	312.0	765.7	300.0	501.7	577.8
L. TEMP	323.2	869.5	300.0	444.2	336.8
UL. VOLUM	67.8	23.0	0.0	78.4	20.9
UL. THICK	1.1	2.4	0.0	2.4	2.3
CE. TEMP	310.9	800.3	300.0	438.2	507.5
UW. TEMP	307.4	676.5	300.0	404.5	455.7
LW. TEMP	307.1	740.5	300.0	391.5	356.2
FL. TEMP	306.5	782.1	300.0	415.5	365.3
PLUME	0.000E+00	6.834E-03	0.000E+00	0.000E+00	0.000E+00
PYROLIS	0.000E+00	5.000E-03	0.000E+00	0.000E+00	0.000E+00
QF	0.000E+00	9.050E+01	0.000E+00	0.000E+00	0.000E+00
QSRW	-1.294E-02	-7.946E-01	-1.527E-06	1.936E-02	-1.424E-01
	1.459E-02	1.565E+00	4.247E-07	5.467E-01	4.427E-01
QSCW	2.814E-03	-8.457E-03	-1.240E-09	4.565E-01	4.722E-01
	5.877E-03	2.698E-02	-2.274E-06	9.731E-03	-1.995E-01

UPPER LAYER SPECIES CONCENTRATION

O2 PPM	9.631E+04	0.000E+00	2.070E+05	76.0	50.9
CO2 PPM	1.146E+05	3.876E+05	0.000E+00	3.789E+05	3.823E+05
CO PPM	3.377E+03	1.142E+04	0.000E+00	1.117E+04	1.127E+04
OD 1/M	8.60	11.9	0.000E+00	17.7	15.5
CT GM/M3	1.949E+03	2.265E+03	0.000E+00	3.509E+03	3.095E+03

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11. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here)  This report describes the first version of a method for predicting the hazards to the occupants of a building involved in a fire. To implement this method, a software package called HAZARD I is provided. It includes a scenario development utility (PRODUCT.ONE); an interactive program for inputting data to the fire model (FINPUT); a data base program (FIREDATA) with files of thermophysical, thermochemical, and reference toxicity data; the FAST model for multi-compartment energy and mass transport; a graphics utility for plotting data (FASTPLOT); a detector/sprinkler activation model (DETECT); an evacuation model which includes human behavior (EXITT); and a tenability model (TENAB) which evaluates the impact of the predicted exposure of the occupants in terms of incapacitation or lethality from temperature or toxicity, or incapacitation by burns. All of the software operates on a personal computer. Volume 2 contains complete documentation of a set of worked example cases and Volume 3 contains a complete copy of the data in the data base.				
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